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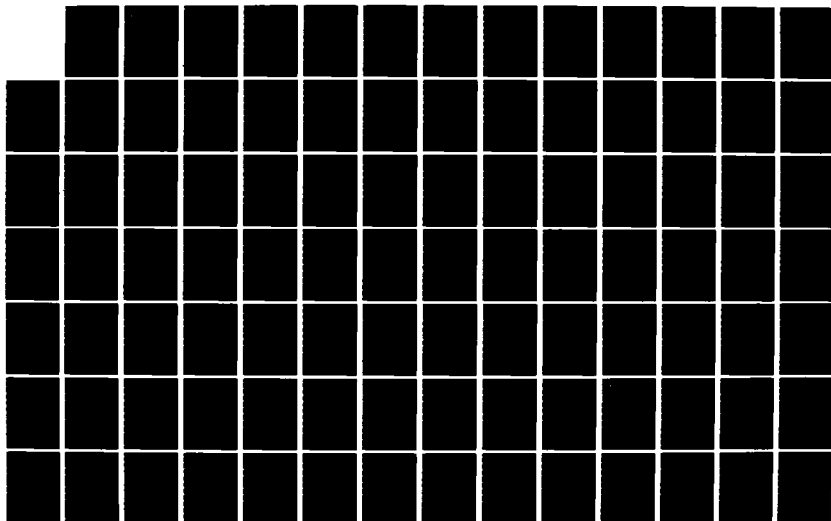
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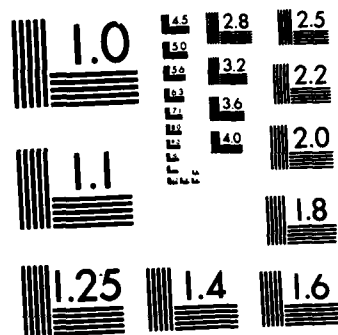
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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AFIT/CI/NR 83-55T	2. GOVT ACCESSION NO. AD-A134248	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) A Job Satisfaction and Retention Study of Air Force Medical Service Corps Officers Recently Acquired From Civilian Sources	5. TYPE OF REPORT & PERIOD COVERED THESIS/DISSERTATION	
7. AUTHOR(s) Michael V. Ciccocioppo, Jr.	6. PERFORMING ORG. REPORT NUMBER	
9. PERFORMING ORGANIZATION NAME AND ADDRESS AFIT STUDENT AT: Baylor University	8. CONTRACT OR GRANT NUMBER(s)	
11. CONTROLLING OFFICE NAME AND ADDRESS AFIT/NR WPAFB OH 45433	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	12. REPORT DATE Aug 1983	13. NUMBER OF PAGES 101
	15. SECURITY CLASS. (of this report) UNCLASS	
15a. DECLASSIFICATION DOWNGRADING SCHEDULE		
16. DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE: IAW AFR 190-17 Sort 1983 <i>Lynn E. Wolaver</i> LYNN E. WOLAVER Dean for Research and Professional Development		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) ATTACHED		

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A JOB SATISFACTION AND RETENTION STUDY
OF AIR FORCE MEDICAL SERVICE CORPS OFFICERS
RECENTLY ACQUIRED FROM CIVILIAN SOURCES

A Graduate Research Project
Submitted to the Faculty of
Baylor University
In Partial Fulfillment of the
Requirements for the Degree
of
Master of Health Administration

by

Captain Michael V. Ciccocioppo, Jr., USAF, MSC

August 1983

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ACKNOWLEDGEMENTS

I wish to acknowledge the valuable assistance provided by two members of the Department of Behavioral Sciences and Leadership, United States Air Force Academy, Colorado Springs, Colorado. Major Charles D. Gorman, Associate Professor, instructed me in the early stages of this project concerning the theories underlying job satisfaction research. Captain Paul M. Grunzke, Instructor, tutored me in the use of the Statistical Package for the Social Sciences, and he was always available to render any technical assistance I needed.

I acknowledge the support and cooperation of my preceptor, Colonel Thomas T. Tibbetts, Administrator, United States Air Force Academy Hospital, who allowed me the freedom to devote a considerable amount of time to work on this project instead of one that might have been of more practical benefit to the hospital. I also acknowledge the cooperation of Major Thomas McDougall, Medical Career Division, Office of the Surgeon, Air Force Manpower and Personnel Center, Randolph Air Force Base, Texas, for giving me information on the Medical Service Corps officer selection process, and for providing the list of subjects included in this study.

Finally, I extend my heartfelt thanks to my wife Peggy, and my children, Mary, David and Melinda, for their understanding and moral support not only for the year that I worked on this project, but especially during the entire two years that I devoted to graduate school. Without their support, none of this would have been possible.

ABSTRACT

The United States Air Force (AF) is experiencing a shortage of upper grade Medical Service Corps (MSC) officers because of past emphasis on the selection of prior enlisted members for commission in the corps. The recruitment of significantly more civilians into the MSC in recent years is hoped to provide a solution to this shortage in the long term. The purpose of this project is to determine if these new officers are satisfied in their jobs, and if they will stay in the corps for a career.

The literature review examines past research on job satisfaction, including summaries of various theories and examples of instruments used to measure job satisfaction. Research on turnover is also reviewed and the connections between job satisfaction and turnover are elucidated.

A summary of the research methodology employed in this project details the questionnaire utilized, which included the widely used Job Descriptive Index (JDI) to measure job satisfaction levels. The excellent response rate of 87 percent is reported and discussed. The demographic characteristics of the respondents are summarized and reviewed.

An analysis of the JDI scores reveals that these new officers were indeed more satisfied in their jobs than the subjects studied by previous researchers. Using the chi-square test of independence, the five dimensions of job satisfaction (work, pay, promotion, supervision, and co-workers) are evaluated against the demographic characteristics of the respondents. Significant relationships are reported and explanations

are offered.

The career intentions of the respondents are examined to learn that 58 percent hoped to become hospital administrators, and 65 percent intended to stay in the MSC for a career. The chi-square test of independence tests the relationships between career intentions and demographics, and between career intentions and JDI scores. Again, significant relationships are reported and explanations are offered. The positive and negative factors which may influence their decisions to stay in or get out of the corps are presented and analyzed.

Finally, it is concluded that AF MSC officers recently acquired from civilian status are satisfied in their jobs, and that the retention rate of this group should be good. It is recommended that the AF continue to recruit new MSC officers from outside the military. Suggestions for further research in this area are provided.

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I. INTRODUCTION

Development of the Problem

Conditions which prompted the study

When the draft ended in the early 1970s, the Medical Service Corps (MSC) of the United States Air Force (AF) found it difficult to attract civilians with appropriate graduate and undergraduate degrees to its ranks. Although AF enlisted members with appropriate degrees had always been a source of new MSC officers, the corps began accepting even greater numbers of these personnel to fill its ranks. These members had anywhere from one to sixteen years of enlisted active duty time when they joined the MSC. This meant that they would be eligible for retirement as officers when they acquired: (1) twenty years of total active federal military service for those who had ten years or less enlisted time when commissioned, or (2) ten years' officer time for those who had more than ten years' enlisted time when they were commissioned.

Many of these officers retired from the AF as soon as they were eligible to do so. This has created a significant shortfall of AF MSC officers in field grade and senior officer ranks (see Table 1). This fact, coupled with the glut of civilians graduating from Master's programs in health administration,¹ prompted the AF to shift its emphasis from obtaining MSC officers from enlisted ranks to obtaining them from civilian sources.² The Air Force Recruiting Service was charged with recruiting qualified civilians for the MSC in March 1981. Table 2

TABLE 1

AIR FORCE MEDICAL SERVICE CORPS AUTHORIZED AND
ASSIGNED STRENGTHS AS OF MARCH, 1982

<u>Rank</u>	<u>Authorized</u>	<u>Assigned</u>	<u>Shortfall</u>
Major	220	167	53
Lt Colonel	189	143	46
Colonel	82	58	24
Total	491	368	123

SOURCE: Adapted from: Air Force Manpower and Personnel Center, Office of the Surgeon, Medical Programming and Analysis Group, Medical Personnel Information Summary (Randolph Air Force Base, Tex.: Medical Programming and Analysis Group, March, 1982), pp. 97 - 99.

TABLE 2

AIR FORCE MEDICAL SERVICE CORPS OFFICERS
SELECTED FROM CIVILIAN SOURCES COMPARED
TO TOTAL SELECTED FROM ALL SOURCES

<u>Selection Board</u>	<u>Total Selected</u>	<u>Civilians Selected</u>	<u>Percent Civilians</u>
Jun 80	8	2	25%
Oct 80	25	10	40%
Dec 80	8	0	0%
Mar 81	75	37	49%
Jun 81	21	8	38%
Oct 81	46	31	67%
Jan 82	21	14	67%
Apr 82	25	22	88%
Nov 82	29	17	59%
Feb 83	30	15	50%
Total	288	156	54%

SOURCE: Compiled from "Profile of Medical Service Corps Selection Board Applicants" report prepared after each board by Major Thomas J. McDougall, Medical Personnel Programs Branch, Air Force Manpower and Personnel Center, Randolph Air Force Base, Texas.

illustrates the trend toward selecting civilians for commission in the MSC since June, 1980. Nearly 85 percent of these civilian accessions have Master's degrees. Many have worked in management positions in health care administration prior to their entry into the AF MSC.

These highly educated and experienced officers are being given entry-level jobs within the AF Medical Service, many at small hospitals and clinics. The members of the corps at all levels want to know if these new officers are satisfied in their jobs, and if they will make a career of the AF MSC, thereby solving the upper grade shortfalls which prompted their recruitment.

Applied research questions

Are MSC officers recently obtained from civilian status satisfied with their jobs? Will they make a career of the Air Force Medical Service Corps? Two distinct, but related questions are asked here. The literature review to follow shows how they are related. The conclusion provides answers to both questions based on the research conducted.

Limitations

1. Copyrighted material contained in the survey instrument described under research methodology below could not be used until permission was granted by the owner of the copyright.³
2. Surveys could not be mailed to respondents until permission to do so was granted by the United States Air Force Manpower and Personnel Center (AFMPC).⁴
3. The names and addresses of respondents could only be obtained

from the AFMPC.

4. Mathematical manipulation of the survey response data was limited to the capabilities of the United States Air Force Academy computer using the Statistical Package for the Social Sciences (SPSS) program.⁵
5. The project was to have been completed and in final form no later than May 6, 1983, for review and evaluation by the faculty of the Baylor University Graduate School.

Assumptions

For the purpose of this study, the following assumptions are made:

1. The AF Medical Service is interested in recruiting highly qualified officers for the MSC who will make a career of the AF.
2. The views of MSC officers obtained from civilian sources between June, 1980, and June, 1982, will be representative of the views of all MSC officers obtained from civilian sources after June, 1982, if current policies/procedures do not change.

Literature Review

The purpose of this review is twofold. First the generic literature on job satisfaction will be discussed: to determine what job satisfaction is; to review the history of concern over job satisfaction; to describe some theories of job satisfaction; to explain the consequences of job satisfaction; to present contemporary measures of job satisfaction; and to review job satisfaction studies of health care administrators. The second purpose is to examine the literature on turnover: to see why it is such an intensely studied subject; to

illustrate contemporary thinking concerning the turnover process; and to examine the effects of certain job satisfaction components as potential variables in the turnover process.

It is not the purpose of this review to provide a comprehensive review of all the literature on job satisfaction and turnover. Locke estimated that over 3,350 articles (or dissertations) on the subject of job satisfaction can be found in the literature.⁶ The reader should consult this reference for a more complete description of the subject. Turnover has also been consistently studied over the years. Porter and Steers provided a summary of past literature on the subject.⁷ More recent literature is available and some of it is included in the review of turnover.

Job satisfaction

Definition.-- Smith, et.al., provided the most concise definition found by the researcher: "Job satisfactions are feelings or affective responses to facets of the situation."⁸ One common theme that pervades the research and application of job satisfaction theory is the emotional character of satisfaction and dissatisfaction. Landy and Trumbo contended that at any given point in time an individual occupies a point on a continuum ranging from extreme happiness through neutrality to extreme unhappiness. Job-related stimuli are at least partially responsible for a person's position on the continuum. Therefore, an individual's interaction with the work environment is assumed to affect his or her emotional state.⁹ The factors which cause these emotional feelings are not totally agreed upon in the literature. Before delving into the theories of job satisfaction, however, a brief review of the

history of job satisfaction should help put the topic into the proper perspective.

Historical perspective.¹⁰-- Frederick W. Taylor pioneered the study of job satisfaction in the early 20th Century. He contended under his scientific management theory that workers who received the highest possible earnings with the least amount of fatigue would be satisfied and productive. The problem of fatigue reduction continued to be studied during World War I and into the 1930s. One of the first substantial research efforts that made a break with Taylor's restricted view of the worker and satisfaction was conducted at the Hawthorne plant of the Western Electric Company in Cicero, Illinois. The Hawthorne studies, in the late 1920s, began as a study of the effects of such factors as rest pauses and incentives on productivity. When the employees failed to react in a mechanistic manner to these changes, however, emphasis soon shifted to the study of attitudes. The researchers concluded that workers' feelings affected their work behavior and their perceptions of their work situation affected their reactions to it.

The Hawthorne studies shaped the trend of research for the next two decades. The human relations movement stressed the central importance of the supervisor and the work group in determining employee satisfaction and productivity. Researchers emphasized the people involved, rather than the work itself. The human relations movement reached its peak of influence in the late 1950s and early 1960s. At that time a new trend began to evolve. Attention refocused on the work itself. The emphasis this time was on vertical rather than horizontal job enlargement. Theorists suggested that real satisfaction with

the job could only be provided by allowing individuals enough responsibility and discretion to enable them to grow mentally.

This new school of thought continues to pervade the management of job satisfaction today. The present researcher contends that the recent movement toward quality circles is just another way to give employees more challenging participation in their work to satisfy the higher levels of intelligence commonplace among the workforce. In the section that follows, more specific theories of job satisfaction are reviewed.

Theories.-- Maslow's need hierarchy theory asserted that man has five basic categories of needs: physiological, safety, belongingness and love, esteem, and self-actualization. The theory held that these needs are arranged in a hierarchy and that higher needs are neither desired nor sought until lower needs are satisfied or fulfilled. It implied that the optimal job environment for a given employee is the one which corresponds most closely to his or her position on the need hierarchy. Although this theory is intuitively appealing, Locke contended that there is little firm support in the literature for its major thesis of a fixed hierarchy of needs which automatically govern action.¹¹

Herzberg's motivator-hygiene theory held that satisfaction and dissatisfaction are two completely different phenomena. Satisfaction depends on work related factors such as achievement, promotion, recognition, and responsibility. He called these "motivators." Other factors classified as involving supervision, interpersonal relations, working conditions, company policies, and salary were labeled "hygienes." He said these are the primary causes of job dissatisfaction. Landy and Trumbo revealed that research on this two-factor theory has been voluminous

and generally discouraging. Numerous researchers have been unable to replicate Herzberg's findings. Research on this theory has substantially decreased.¹²

Lawler's facet satisfaction theory contended that the single most important contributor to the satisfaction process is perception. Workers perceive their personal job inputs and compare these to referent others. Then they compare (a) the rewards they perceive they receive, to (b) their perceptions of the amounts received by the referent others. If (a) = (b) they are satisfied. If (a) is less than (b) they are dissatisfied. And if (a) is greater than (b) they feel guilty and uncomfortable. Limited research has not totally supported this theory. Studies have shown that when (a) is greater than (b), people tend to be more satisfied, rather than guilty.¹³

Locke's value theory distinguished between value and need. Needs are objective elements that ensure an individual's survival, regardless of his or her desires. Values are subjective, and represent what a person desires at either a conscious or subconscious level. Locke held that job satisfaction results from, "the perception of one's job as fulfilling or allowing the fulfillment of one's important job values, providing these values are compatible with one's needs."¹⁴ Although this theory is still too recent to have generated any substantive research, Landy and Trumbo believed that it has interesting implications for understanding how "importance" affects job satisfaction.¹⁵

Porter and Steers advocated a concept they called "met expectations." They held that job satisfaction is a function of the discrepancy between what a person encounters on the job in the way of positive and negative experiences and what he or she expected to encounter.

Since different employees can have quite different expectations with respect to payoffs or rewards in a given organizational or work situation, these researchers held that it would not be anticipated that a given variable (e.g., high pay, unfriendly co-workers, etc.) would have a uniform impact on satisfaction levels. They predicted that when an individual's expectations are not substantially met, he or she will be dissatisfied.¹⁶

The energy expended over the years to understand job satisfaction has been motivated by a keen interest in controlling the consequences of satisfaction/dissatisfaction among employees. The next section explains what some of these outcomes are.

Consequences.-- Locke contended that there are two major reasons for being concerned with the phenomenon of job satisfaction. It can be viewed, first, as an end in itself, since happiness is a goal of life. Secondly, it can be studied because it contributes to other attitudes and outcomes.¹⁷ Numerous studies illustrated the effects of job satisfaction on the quality of life.¹⁸ They found significant correlations between attitudes toward the job and those toward life and self. Physical health and longevity were also strongly correlated with job satisfaction/dissatisfaction. Consistent relationships between satisfaction and various forms of mental health were also reported in the literature.

Though the quality of life issues are important, it must be admitted that the outcomes associated with employee behavior and action as a result of job satisfaction/dissatisfaction are what concern both researchers and employers the most. This concern is associated with the economic consequences of these outcomes. Two of these outcomes studied intensely deal with performance and withdrawal.

Ever since the early days of industrial psychology researchers believed that satisfied workers were productive workers. Indeed, the theory held that the more satisfied a worker was with his or her job, the more productive he or she would be. The Hawthorne studies and the human relations movement that followed sanctified the search for this relationship. But the search proved to be discouraging. Extensive reviews of the satisfaction literature in 1955, 1957, and 1964 consistently found negligible relationships between satisfaction and level of performance or productivity.¹⁹ Following his own ambitious review of the literature, Locke concluded that "job satisfaction has no direct effect on productivity."²⁰

Modern research tends to support a theory which is totally opposite of that which was traditionally believed. As Figure 1 illustrates, the new theory holds that performance that is appropriately rewarded produces satisfaction.

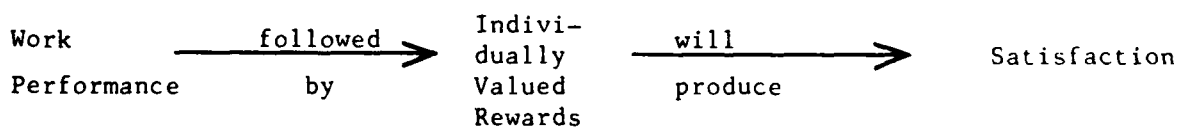


Figure 1 -- Satisfaction as a Function of Performance

SOURCE: John R. Schermerhorn, Jr., James G. Hunt, and Richard N. Osborn, Managing Organizational Behavior (New York: John Wiley & Sons, Inc., 1982), p. 51.

A serious consequence of job dissatisfaction researched extensively concerns its relationship to withdrawal from the workplace. Withdrawal

can take two forms, absenteeism or turnover. Like productivity, absenteeism was long believed to be directly a result of job dissatisfaction. Research has not substantiated this belief.²¹ There has been consistent support for the significance of the relationship between job dissatisfaction and employee turnover.²² This relationship provides the foundation for the present project. Therefore, a thorough consideration of the turnover process and how it is effected by job satisfaction is presented in a later section. For now, it is important to review the various measures which have been used to empirically determine job satisfaction levels.

Measures.-- Price stated that there are at least five excellent measures of job satisfaction that researchers may select from. Satisfaction, he added, "is the only concept for which there is an abundance of excellent measures."²³ Three of these measures are presented below to illustrate some of the different approaches found in the literature.

A measure of general job satisfaction developed by Brayfield and Rothe utilizes the following job questionnaire to examine employee attitudes:²⁴

Some jobs are more interesting and satisfying than others. We want to know how people feel about different jobs. This blank contains 18 statements about jobs. You are to cross out the phrase below each statement which best describes how you feel about your present job. There are no right or wrong answers. We should like your honest opinion on each one of the statements. Work out the sample item numbered (0).

0. There are some conditons concerning my job that could be improved.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE²⁵
1. My job is like a hobby to me.
2. My job is usually interesting enough to keep me from getting bored.
3. It seems that my friends are more interested in their jobs.

4. I consider my job rather unpleasant
5. I enjoy my work more than my leisure time.
6. I am often bored with my job.
7. I feel fairly well satisfied with my present job.
8. Most of the time I have to force myself to go to work.
9. I am satisfied with my job for the time being.
10. I feel that my job is no more interesting than others I could get.
11. I definitely dislike my work.
12. I feel that I am happier in my work than most other people.
13. Most days I am enthusiastic about my work.
14. Each day of work seems like it will never end.
15. I like my job better than the average worker does.
16. My job is pretty uninteresting.
17. I find real enjoyment in my work.
18. I am disappointed that I ever took this job.

The five responses are scored from one to five depending on the format of the question. Questions 1, 2, 5, 7, 9, 12, 13, 15, and 17 are scored five for "Strongly Agree" and one for "Strongly Disagree." The remaining questions are scored just the opposite, i.e. one to five from left to right. The scores are summed and range from 18 for low satisfaction to 90 for high satisfaction. The authors provided limited information on the reliability and validity of the instrument.²⁶

A measure of general need satisfaction, based on a modified version of Maslow's categorization of needs, was developed by Porter and Lawler.²⁷ The following questionnaire is used to collect the data:

On the following pages will be listed several characteristics of qualities connected with your own management position. For each such characteristic, you will be asked to give three ratings.

- a) How much of the characteristic is there now connected with your management position?
- b) How much of the characteristic do you think should be connected with your managerial position?
- c) How important is this position characteristic to you?

Each rating will be on a seven-point scale, which will look like this:
 (minimum) 1 2 3 4 5 6 7 (maximum)

You are to circle the number on the scale that represents

the amount of the characteristic being rated. Low numbers represent low or minimum amounts, and high numbers represent high or maximum amounts. If you think there is "very little" or "none" of the characteristic presently associated with the position, you would circle numeral 1. If you think there is "just a little," you would circle numeral 2, and so on. If you think there is a "great deal but not a maximum amount," you would circle numeral 6. For each scale, circle only one number.

Please do not omit any scales.

1. The feeling of self-esteem a person gets from being in my management position:
 - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7²⁸
 - c) How important is this to me? 1 2 3 4 5 6 7²⁸
2. The authority connected with my management position:
3. The opportunity for personal growth and development in my management position:
4. The prestige of my management position inside the company (that is, the regard received from others in the company):
5. The opportunity for independent thought and action in my management position:
6. The feeling of security in my management position:
7. The feeling of self-fulfillment a person gets from being in my management position (that is, the feeling of being able to use one's own unique capabilities, realizing one's potentialities):
8. The prestige of my management position outside the company (that is, the regard received from others not in the company):
9. The feeling of worthwhile accomplishment in my management position:
10. The opportunity, in my management position, to give help to other people:
11. The opportunity, in my management position, for participating in the setting of goals:
12. The opportunity, in my management position, for participation in the determination of methods and procedures:
13. The opportunity to develop close friendships in my management position:

Respondent's satisfaction scores are calculated by subtracting the score on response (a) from the score on response (b). The lower the score, the higher the satisfaction. The most satisfied respondent

receives a score of zero, whereas the most dissatisfied respondent receives a score of six. Separate scores are calculated for the following five need categories: Security (No. 6); Social (Nos. 10 and 13); Esteem (Nos. 1, 4, and 8); Autonomy (Nos. 2, 5, 11, and 12); and Self-Actualization (Nos. 3, 7, and 9). Means are then calculated for each of these five need categories. The authors provided some information on the validity and no data relevant to the reliability of this instrument.²⁹

A multidimensional measure of job satisfaction developed by Smith, Kendall, and Hulin, called the Job Descriptive Index (JDI), uses the following questionnaire to measure five specific aspects of employee job satisfaction:³⁰

Think of your present work. What is it like most of the time? In the blank beside each word given below, write

 y for "YES" if it describes your work
 n for "NO" if it does not describe it
 ? if you cannot decide³¹

WORK

 Y Fascinating
 N Routine
 Y Satisfying
 N Boring
 Y Good
 Y Creative
 Y Respected
 N Hot
 Y Pleasant
 Y Useful
 N Tiresome
 Y Healthful
 Y Challenging
 N On your feet
 N Frustrating
 N Simple
 N Endless
 Y Gives a sense of accomplishment

PAY

 Y Income adequate for normal expenses
 Y Satisfactory profit sharing
 N Barely live on income
 N Bad
 Y Income provides luxuries
 N Insecure
 N Less than I deserve
 Y Highly paid
 N Underpaid

PROMOTIONS

- Y Good opportunity for advancement
- N Opportunity somewhat limited
- Y Promotion on ability
- N Dead-end job
- Y Good chance for promotion
- N Unfair promotion policy
- N Infrequent promotions
- Y Regular promotions
- Y Fairly good chance for promotions

SUPERVISION

- Y Asks my advice
- N Hard to please
- N Impolite
- Y Praises good work
- Y Tactful
- Y Influential
- Y Up-to-date
- N Doesn't supervise enough
- N Quick tempered
- Y Tells me where I stand
- N Annoying
- N Stubborn
- Y Knows job well
- N Bad
- Y Intelligent
- Y Leaves me on my own
- N Lazy
- Y Around when needed

CO-WORKERS

- Y Stimulating
- N Boring
- N Slow
- Y Ambitious
- N Stupid
- Y Responsible
- Y Fast
- Y Intelligent
- N Easy to make enemies
- N Talk too much
- Y Smart
- N Lazy
- N Unpleasant
- N No privacy
- Y Active
- N Narrow interest
- Y Loyal
- N Hard to meet

Responses are scored according to Table 3. The scores are summed for each of the five dimensions. To make scores more nearly comparable for the five scales, the scores of the pay and promotion scales are doubled. Therefore, the range of total scores for each of the dimensions is 0 for low satisfaction to 54 for high satisfaction.³² The authors provided extensive research to confirm the validity and reliability of the instrument.³³ Recently, Schriesheim and Kinicki conducted a study of the validity and reliability of the JDI to determine if these properties had diminished since Smith, Kendall, and Hulin

conducted their initial assessment during the 1960s. The results showed that "the JDI possesses impressive psychometric properties, including substantial demonstrated convergent, discriminant, concurrent, and predictive validity, as well as acceptable internal consistency and test-retest reliability, and an even balance of positively and negatively worded items."³⁴ Another recent study by Schneider and Dachler also confirmed the reliability of the JDI, and found that the five satisfaction scales retain their relative independence over time.³⁵

TABLE 3

SCORING OF THE JOB DESCRIPTIVE INDEX

<u>Response</u>	<u>Score</u>
Yes to a positive item	3
No to a negative item	3
? to any item	1
Yes to a negative item	0
No to a positive item	0

SOURCE: Patricia Cain Smith, Lorne M. Kendall, and Charles L. Hulin, The Measurement of Satisfaction in Work and Retirement (Chicago: Rand McNally and Company, 1969), p. 79.

Many researchers agree that the JDI is the most commonly used measure of job satisfaction in existence today.³⁶ Well over half of the job satisfaction studies conducted over the past decade used the JDI. It is used at least five to six times more often than the next most commonly used instrument. According to Schneider and Dachler:

The methodological rigor employed during its construction and validation, its normative data, its relatively low required reading level (about 7th grade),

and the fact that it assesses satisfaction with five of the most basic or generally most visible aspects of a person's work role (work, pay, promotion, supervision, and co-workers) most likely account for the JDI's attractiveness to researchers.³⁷

For these reasons, the present study also utilized the JDI to collect data pertinent to the job satisfaction of MSC officers recently obtained from civilian status. The results of this study are presented later in this paper. The next section presents a summary of some satisfaction studies of health care administrators.

Health care administrator studies.-- Only two published job satisfaction studies of health care administrators were found. The first studied the relationships between role clarity and other variables, including job satisfaction.³⁸ Sixty-three professional/administrative personnel at a major hospital completed a questionnaire designed to measure the degree to which they felt that the organization communicated adequate job-related information to them, the degree to which they were generally satisfied with their jobs, and other factors. The study concluded that respondents with high role clarity perceived significantly greater overall job satisfaction than those with low role clarity.³⁹

The second study examined the perceived need fulfillment of hospital administrators in different size teaching hospitals, and at different positions in the hierarchy of those hospitals.⁴⁰ Fifty-five top level and forty-nine middle level administrators at eighty-five teaching hospitals throughout Canada completed Porter and Lawler's need satisfaction questionnaire (described here on pp. 12 & 13). This study concluded that perceived need satisfaction was related to both level of position within hospital hierarchy, and size of the

hospital. Higher levels fulfilled more needs, as did larger hospitals.⁴¹

An unpublished study which this researcher learned about was conducted in 1981 by the AFMPC. Although he was not at liberty to provide a copy of the study results, the staff officer who conducted the study related some general comments about it.⁴² He distributed a questionnaire divided into multiple choice and essay sections to 600 AF MSC officers with more than seven, but less than 21 years of commissioned service. Three hundred and seventy-four questionnaires were returned, but only 235 respondents completed the essay portion of the survey. Generally, analysis of the multiple choice section revealed that the officers had a good attitude toward the corps. Responses to the essay questions did reveal some dissatisfaction over resource constraints, economic considerations, and promotion uncertainty.⁴³

The first part of this literature review concentrates on job satisfaction. Job satisfaction is defined and put into an historical perspective. Major theories are presented. Some questionnaires used to measure perceived job satisfaction are outlined. Studies of health care administrators are reviewed. The section on the consequences of job satisfaction/dissatisfaction explains both the personal and work-related outcomes that have been demonstrated. The next part of this review delves more deeply into one of those consequences, namely turnover. The relationships of job satisfaction and other variables to turnover are explained based on the results of numerous studies published in the literature.

Turnover

Importance.-- When members of an organization leave the organization voluntarily, we refer to their departure as turnover. Layoffs, dismissals, retirements, and deaths are excluded because they are forms of involuntary leaving. Additionally, transfers and promotions, because they take place within organizational boundaries, are not included under the term turnover.⁴⁴ Organizational behavior researchers have extensively investigated turnover. Organizations' concern over the dysfunctional consequences of high turnover rates spurred this research. They felt there was an inverse relationship between turnover and organizational effectiveness due to the costs associated with getting new people to the same level as employees who leave. Although Mitchel noted that the positive effects of turnover among marginally effective personnel can outweigh the costs,⁴⁵ the overwhelming amount of turnover literature sought to determine its root causes so that action can be taken to reduce and control it.⁴⁶

Process.-- After conducting an extensive review of the turnover literature ten years ago, Porter and Steers concluded that "much more emphasis should be placed in the future on the psychology of the withdrawal process."⁴⁷ The ensuing decade has seen much work in this area. Many models of this process were developed.⁴⁸ They ranged in complexity from very simple to very sophisticated. Some were empirically substantiated, others were based on educated guesses. The model in Figure 2 was empirically substantiated, and it is of medium complexity in relation to the other models reviewed.

Mobley, Horner, and Hollingsworth confirmed the findings of most research previous and subsequent to their study.⁴⁹ That is, there was

a consistent significant negative relationship between job satisfaction and turnover (high satisfaction yields low turnover and vice versa). They also confirmed research findings that the higher the age and tenure of the employee, the lower the turnover. An important finding of this study was that the relationship between intention to quit and actual turnover was significantly stronger than the satisfaction-turnover relationship. As illustrated in Figure 2, they found that three other factors were intermediate linkages between job satisfaction and turnover: the probability of finding an acceptable alternative job, thinking of quitting, and intention to search for a new job.

Its authors admitted that this model was not all encompassing. Yet it highlighted the salient features of the turnover process. Before moving into the research methodology, it is important to review some of the important variables which may contribute to turnover.

Variables.-- Some of the variables that consistently impacted on turnover are illustrated in Figure 1. The purpose here is to examine more closely the five dimensions of job satisfaction (work, pay, promotion, supervision, and co-workers) to determine their individual relationships with turnover.

Based on their comprehensive review of the literature on turnover, Porter and Steers summarized their findings by stating that, "In general, turnover has been found to be positively related to dissatisfaction with the content of the job among both blue- and white-collar workers."⁵⁰ More recent research continued to demonstrate the strong relationship between dissatisfaction with work and turnover experience. Two independent studies conducted in the latter half of the 1970s, used the JDI and found that the work scale was the only JDI scale that showed a

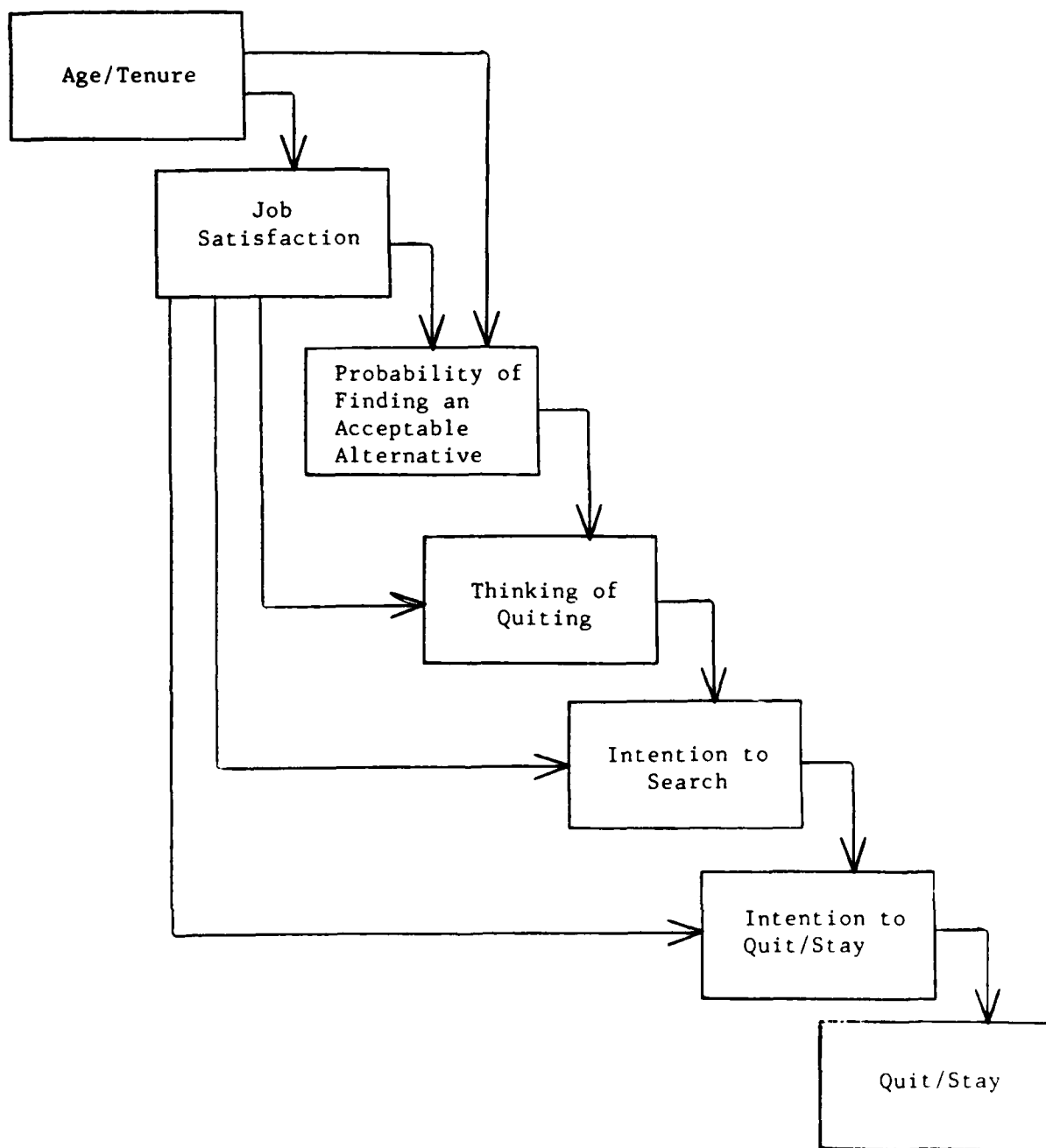


Figure 2 -- The Employee Withdrawal Decision Process

SOURCE: Adapted from: William H. Mobley, Stanley O. Horner, and A. T. Hollingsworth, "An Evaluation of Precursors of Hospital Employee Turnover," Journal of Applied Psychology 63 (August 1978): 410.

significant statistical relationship with turnover.⁵¹

Porter and Steers contended that, "There is no lack of empirical investigations into the relationships between pay and promotion and withdrawal, nor is there much disagreement over the conclusion that low pay and lack of promotional opportunities can represent a primary stated cause for withdrawal."⁵² After reviewing more recent research, Mobley, et.al. found an inconclusive pattern of results with respect to pay and promotion, in contrast with the consistent negative generalization of Porter and Steer's review.⁵³ More recently, Price and Mueller found that the effects of pay and promotional opportunity on turnover were too small to be meaningful.⁵⁴

With respect to co-worker relations, Porter and Steers found that a majority of investigations showed a strong positive relationship between this variable and the propensity to remain on the job. They noted, however, that these findings did not go unchallenged.⁵⁵ Mobley, et.al. were less confident of this relationship.⁵⁶

Porter and Steers were somewhat tentative in their support for a link between supervisory relations and turnover.⁵⁷ However, Mobley, et.al. found moderately consistent support for the negative relationship between supervisory style and turnover.⁵⁸ Recently, Graen, Linden, and Hoel provided more evidence to sustain the connection between supervision and employee withdrawal. They concluded:

Specifically, perceptions of the behavioral exchange between a leader and member have been shown to be an important part of the withdrawal process. Members tend to remain in the organization when they see themselves actively exchanging support, resources, extra effort, and the like with their leaders. Members who report that they are only exchanging enough with their leaders to satisfy contractual obligations tend to leave the organization.⁵⁹

The second part of this literature review provides important background information on turnover. Turnover is defined and its dysfunctional consequences in terms of organizational effectiveness are presented as the reasons why it has been the subject of extensive investigation. The employee withdrawal decision process model illustrates the connection between job satisfaction and turnover, as well as other intermediate linkages in the process. Finally, the five dimensions of job satisfaction are reviewed as variables that may or may not effect workers' decisions to remain in their organizations.

Bearing this review of the job satisfaction and turnover literature in mind, the researcher presents the methodology used to answer the applied research questions: Are MSC officers recently obtained from civilian status satisfied with their jobs? Will they make a career of the AF MSC?

Research Methodology

Instrument

The survey instrument used to conduct this research is presented in Appendix A. Part I contains demographic information used to assess respondents' satisfaction levels and potential for retention. Part II is the JDI, described in the literature review, pp. 14 - 17. Permission to use the JDI was granted by its senior author in a letter to the researcher, dated November 8, 1982 (Appendix B). Part III is designed to determine the subjects' long range occupational goals and whether or not they intend to stay in the AF MSC for a career. Open ended

questions are included to allow them to express in their own words the factors that might lead them to remain in the MSC or get out of the corps.

Subjects

Approval to send the survey instrument to active duty AF MSC officers was granted by AFMPC in a letter to the researcher, dated November 17, 1982 (Appendix C). Upon receipt of this letter, the researcher telephonically requested Major Thomas McDougall, Office of the Surgeon, AFMPC, to provide a listing of all AF MSC officers commissioned directly from civilian status between June, 1980 and June, 1982. Address labels for all subjects were also requested and received. On December 22, 1982, the researcher mailed the survey instruments and self-addressed stamped envelopes to the 113 subjects listed on the roster obtained from Major McDougall. A letter to the subjects explaining the purpose of the survey and the need for their support (Appendix D) was enclosed with the questionnaire. Officers were requested to return the completed forms to the researcher in the self-addressed stamped envelopes no later than January 17, 1983.

Response

By January 17, 1983, the researcher had received a total of ninety-nine completed survey forms. This represented a gross return rate of 87.6 percent (99/113). Initial review of the surveys revealed that two could not be included in the study. One respondent completed the survey, but remarked at the end that he or she was commissioned directly from enlisted status after having served four years and nine months in the active AF. Because this individual should not have been

included in the first place the total possible subjects was reduced to 112. Another survey was not completed correctly. The officer completed the JDI part of the survey with "Ys", "Ns", and "As". It appeared that the "As" were supposed to represent "?s". However, since there was no way to know for certain what the respondent's intention was, the form was disqualified. This left a net response rate of 86.6 percent (97/112). This rate allows for generalization to all 112 officers in the population at the 95 percent confidence level.⁶⁰

Scores

The survey forms were manually scored by the researcher. Part I was scored using the scoring key in Appendix E. Numeric values were simply assigned to the items checked. The JDI scales in Part II were scored according to the weights presented in Table 3 of this paper (p. 16). Five separate scores ranging from 1 to 54 were obtained for each respondent. All Part III responses were reviewed and lists were made of all the answers given for questions one through four. Appendix F contains the final scoring key for Part III. Only one response each was recorded for questions one and two. Up to three responses each were recorded for questions three and four. If less than three responses were provided, only those provided were recorded. If more than three were noted, only the first three were scored. After all questionnaires were completely scored, the researcher transferred the scores onto survey response sheets, an example of which is provided in Appendix G. Then he entered this data into the USAF Academy computer for manipulation and analysis. The results of this analysis are presented in the next chapter.

FOOTNOTES

¹The oversupply of masters prepared health care administrators has been well documented in the literature. See, for example: Cynthia DeWitt, "Hospital Administrators Face Stiff Competition in Job Market." Hospitals 52 (October 16, 1978): 61; Charles Gerold, "The Administrator's Marketplace." Hospital Forum 24 (July/August 1981): 21-22; and Sue Moyerman, "Supply and Demand for Health Care Administration Graduates." Hospital Administration 20 (Fall 1975): 62-70.

²The Chief of the Air Force Medical Service Corps publicly advocated the commissioning of more civilians with health care experience. See: Charles W. Boone, "Digest Talks With Colonel Donald B. Wagner." USAF Medical Service Digest 31 (March-April 1980): 17.

³This requirement is stipulated in Patricia Cain Smith, Lorne M. Kendall, and Charles L. Hulin, The Measurement of Satisfaction in Work and Retirement, (Chicago: Rand McNally and Company, 1969), p. 82.

⁴This requirement is stipulated in U.S. Air Force Institute of Technology, AFITR 53-1, Civilian Institution Programs Student Regulation. (Wright-Patterson AFB, Ohio: Air Force Institute of Technology, August 1, 1982), paragraph 7-6.

⁵This program is described in Norman H. Nie, et.al. Statistical Package for the Social Sciences, 2d Ed. (New York: McGraw-Hill Book Company, 1975).

⁶Edwin A. Locke, "The Nature and Causes of Job Satisfaction," in Dunnette, Marvin D. (Ed.), Handbook of Industrial and Organizational Psychology. (Chicago: Rand McNally College Publishing Company, 1976), p. 1297.

⁷Lyman W. Porter and Richard M. Steers, "Organizational, Work, and Personal Factors in Employee Turnover and Absenteeism." Psychological Bulletin 80 (April 1973): 151-176.

⁸Smith, Kendall, and Hulin, p. 6.

⁹Frank J. Landy and Don A. Trumbo, Psychology of Work Behavior. (Homewood, IL: The Dorsey Press, 1980), p. 388.

¹⁰The information presented here is drawn from two sources: Ibid, pp. 391-396; and Locke, pp. 1298-1300.

¹¹Locke, pp. 1307-1309.

¹²Landy and Trumbo, pp. 398-399, 406-407.

¹³Ibid., pp. 399-401, 407-408.

¹⁴Locke, p. 1342.

¹⁵Landy and Trumbo, p. 408.

¹⁶Porter and Steers, p. 152.

¹⁷Locke, p. 1328.

¹⁸For more complete summaries of this research, see Landy and Trumbo, p. 420, and Locke, pp. 1328-1330.

¹⁹Locke, p. 1332.

²⁰Ibid., p. 1334.

²¹Evidence that this relationship does not exist can be found in: Landy and Trumbo, pp. 416-418; and Chris W. Clegg, "Psychology of Employee Lateness, Absence, and Turnover: A Methodological Critique and an Empirical Study." Journal of Applied Psychology 68 (February 1983): 88-101.

²²For details on the significance of this relationship, see: Clegg, p. 97; Landy and Trumbo, pp. 416-419; James L. Price and Charles W. Mueller, "A Causal Model of Turnover for Nurses." Academy of Management Journal 24 (September 1981): 559; and Daniel G. Spencer and Richard M. Steers, "Performance as a Moderator of the Job Satisfaction - Turnover Relationship." Journal of Applied Psychology 66 (August 1981): 513.

²³James L. Price, Handbook of Organizational Measurement. (Lexington, MA: D. C. Heath and Company, 1972), p. 158.

²⁴Arthur H. Brayfield and Harold F. Rothe, "An Index of Job Satisfaction" Journal of Applied Psychology 35 (October 1951): 309.

²⁵Each of the 18 questions uses the same responses.

²⁶Ibid., p. 310-311.

²⁷For a more complete explanation of this measure, see: Price, pp. 161-164.

²⁸Each of the 13 questions uses this set of responses.

²⁹Price, pp. 162-163.

³⁰Smith, Kendall, and Hulin, p. 83.

³¹Similar instructions and identical responses are provided for the other four dimensions (supervision, pay, promotions, and co-workers). The response shown beside each item is the one scored in the "satisfied" direction for each scale.

³²It should be noted that five separate scores are obtained. These five scores should not be summed to determine overall satisfaction.

³³Smith, Kendall, and Hulin, pp. 37-68 and 74-82.

³⁴Chester A. Schriesheim and Angelo J. Kinicki, "The Measurement of Satisfaction by the Job Descriptive Index (JDI): A Review." (Unpublished Manuscript, 1982), p. 1.

³⁵Benjamin Schneider and H. Peter Dachler, "A Note on the Stability of the Job Descriptive Index." Journal of Applied Psychology 63 (October 1978): 650.

³⁶For example, see: Landy and Trumbo, p. 415; Porter and Steers, p. 154; Schneider and Dachler, p. 650; and Samuel J. Yeager, "Dimensionality of the Job Descriptive Index." Academy of Management Journal 24 (March 1981): 205.

³⁷Schneider and Dachler, p. 650.

³⁸Gene E. Burton, Robert Kundtz, Gerald Martin, and Dev S. Pathak, "The Impact of Role Clarity on Job Satisfaction for Hospital Managers." Hospital Topics 58 (January-February 1980); 12-17

³⁹Ibid., p. 17.

⁴⁰Slavek J. Hurka, "Need Satisfaction Among Health Care Managers." Hospital & Health Services Administration 25 (Summer 1980): 43-54.

⁴¹Ibid., pp. 53-54.

⁴²Major Henry A. Gath, United States Air Force Regional Hospital, Sheppard Air Force Base, Texas. Telephonic interview, January 6, 1983.

⁴³Ibid.

⁴⁴James L. Price and Charles W. Mueller, "A Causal Model of Turnover for Nurses." Academy of Management Journal 24 (September 1981): 544.

⁴⁵James O. Mitchel, "The Effect of Intentions, Tenure, Personal, and Organizational Variables on Managerial Turnover." Academy of Management Journal 24 (December 1981): 742.

⁴⁶For example, here are some of the most recent turnover studies reviewed: George F. Dreher, "The Role of Performance in the Turnover Process." Academy of Management Journal 25 (March 1982): 137-147; George B. Graen, Robert C. Liden, and William Hoel, "Role of Leadership in the Employee Withdrawal Process." Journal of Applied Psychology 67 (December 1982): 868-872; Ellen F. Jackofsky and Lawrence H. Peters, "The Hypothesized Effects of Ability in the Turnover Process." Academy of Management Review 8 (January 1983): 46-49; David Krackhardt, John McKenna, Lyman W. Porter, and Richard M. Steers, "Supervisory Behavior and Employee Turnover: A Field Experiment." Academy of Management Journal 24 (June 1981): 249-259; Mitchel, Academy of Management Journal 742-751; Price and Mueller, Academy of Management Journal, 543-565; Richard Shikiar and Rodney Freudenber, "Unemployment Rates as a Moderator of the Job Dissatisfaction - Turnover Relation." Human Relations 35(October 1982): 845-856; and Daniel G. Spencer and Richard M. Steers, "Performance as a Moderator of the Job Satisfaction - Turnover Relationship." Journal of Applied Psychology 66 (August 1981): 511-514.

⁴⁷Porter and Steers, p. 173.

⁴⁸Turnover process models can be found in: Schermerhorn, Hunt and Osborn, p. 51; Jackofsky and Peters, p. 48; William H. Mobley, Stanley O. Horner, and A. T. Hollingsworth, "An Evaluation of Precursors of Hospital Employee Turnover." Journal of Applied Psychology 63 (August 1978): 410; and W. H. Mobley, R. W. Griffeth, H. H. Hand, and B. M. Meglino, "Review and Conceptual Analysis of the Employee Turnover Process." Psychological Bulletin 86 (May 1979): 517.

⁴⁹For a complete discussion of the model and their findings, see: Mobley, Horner, and Hollingsworth, pp. 408-414.

⁵⁰Porter and Steers, p. 164.

⁵¹Mobley, Horner, and Hollingsworth, p. 410; and L. K. Waters, Darrell Roach, and Carrie W. Waters, "Estimates of Future Tenure, Satisfaction, and Biographical Variables as Predictors of Termination." Personnel Psychology 29 (Spring 1976): 58.

⁵²Porter and Steers, p. 155.

⁵³Mobley, Griffeth, Hand, and Meglino, p. 513.

⁵⁴Price and Mueller, p. 559.

⁵⁵Porter and Steers, p. 161.

⁵⁶Mobley, Griffeth, Hand, and Meglino, p. 513.

⁵⁷Porter and Steers, p. 157-159.

⁵⁸Mobley, Griffeth, Hand, and Meglino, p. 513.

⁵⁹Graen, Liden, and Hoel, p. 871.

⁶⁰Wayne W. Daniel, Biostatistics: A Foundation for Analysis in the Health Sciences. 2d Ed. (New York: John Wiley & Sons, 1978), pp. 145-146, provided this formula to calculate the required sample size:

$$n = \frac{N z^2 p q}{d^2 (N-1) + z^2 p q}$$

then:

$$86.89 = \frac{(112) (1.96)^2 (.5) (.5)}{.05^2 (112-1) + (1.96)^2 (.5) (.5)}$$

II. DISCUSSION

Significance of Response

The magnitude of the response was excellent. Clearly it was beyond what one would expect for a mailed questionnaire, with a form letter request, and no attempt by the researcher to send out follow-up inquiries. There may be two explanations for this phenomenon. First, the wording of the letter to respondents (Appendix D) was calculated to appeal to them as peers of the researcher. The subjects are young, well educated, and presumably self-motivated. They could easily place themselves in the researcher's situation, and appreciate his sincere need for their cooperation and support. Based on this alone, many probably completed the survey in the spirit of comradery for a fellow MSC officer.

The second explanation for this unexpected return rate may have to do with the desire of the respondents to let their superior officers know how they feel about the AF and the MSC. Whether they are satisfied or dissatisfied, intending to remain in the corps or get out, these energetic officers may want to pass their perceptions on to the senior leaders and chief of the MSC. They may have considered it a rare opportunity, at this stage in their careers, to be heard at the top and possibly affect high level policies within the corps.

Regardless of the reasons, the fact remains that the response was outstanding.

Demographics of Respondents

Appendix H provides a comprehensive breakdown of the demographics of the respondents as reflected in the surveys. The majority (70%) of the subjects were between 26 - 35 years of age (Table H-1). The number of married officers (60) was nearly double the unmarried number (36) (Table H-2). Most (73%) had attained masters degrees (Table H-3), and most (65%) had degrees in health administration related curricula. Almost all the respondents (93%) indicated that they had been AF MSC officers for two years or less (Table H-5). Nearly half (42%) noted that they had served on active duty in the uniformed services at some time, prior to their commission in the corps (Table H-6). The vast majority (89%) were lieutenants (Table H-7).

Seventy-eight percent of the subjects were assigned to inpatient medical treatment facilities, while nearly all the rest worked at outpatient clinics. (Table H-8). Those assigned to all types of medical treatment facilities reported three to one that they filled one position, as opposed to multiple positions (Table H-9). Tables H-10 through H-12 present the numbers of officers assigned to each of the various MSC positions available in medical treatment facilities. Table H-13 provides a summary of all the positions and the total number of times each was checked. The modal position was Director of Patient Affairs, followed by the Medical Squadron Section Commander position. The next most frequently indicated position was "other." A shreadout of these nontypical positions is included as a footnote to the table.

The significance of the sample and the demographics of the respondents provide the foundation on which the job satisfaction and

retention variables are analyzed below.

Analysis of Job Satisfaction

Comparison with neutral scores

The first applied research question seeks to determine if MSC officers recently obtained by the AF from civilian status are satisfied with their jobs. The JDI scores obtained were tabulated, and means and standard deviations for each of the satisfaction variables were calculated. These are presented in Table 4. To evaluate whether or not these mean scores reflect satisfaction or dissatisfaction, they are compared to the scores determined by the authors of the JDI to represent the points for each variable at which a person is neutral

TABLE 4

RESPONDENTS' MEAN JDI SCORES WITH STANDARD DEVIATIONS
COMPARED TO EQUATED NEUTRAL POINTS

<u>Satisfaction Variable</u>	<u>Mean Score^a</u>	<u>Standard Deviation^a</u>	<u>Equated Neutral Point^b</u>	<u>Difference of Mean from Equated Neutral Point</u>
Work	35.8	9.0	26.0	+ 9.8
Pay	32.0	10.0	22.0	+10.0
Promotion	37.9	13.6	20.0	+17.9
Supervision	42.1	11.8	33.0	+ 9.1
Co-Workers	41.4	12.2	32.0	+ 9.4

^a Calculated from responses to the survey presented in Appendix A of this study, n = 97.

^b Presented by P. C. Smith, L. M. Kendall, and C. L. Hulin, The Measurement of Satisfaction in Work and Retirement. (Chicago: Rand McNally and Co., 1969), pp. 80-81.

(neither satisfied, nor dissatisfied). Clearly, these new officers consistently scored well above the equated neutral points for each aspect of their jobs. Based on this comparison alone, it appears that the respondents are satisfied with the five factors analyzed.

Comparison with other studies

The researcher compiled a matrix of the means and standard deviations of JDI scores from studies reported in the literature representing a wide cross section of over 6,400 subjects (Appendix I). To establish a baseline for comparison, he calculated the weighted average mean scores for each satisfaction variable, and compared them to the mean scores obtained from the AF MSC officers under study here. This comparison is presented in Table 5. These officers scored higher in all aspects of their jobs than the thousands of job holders examined under previous studies.

The only weakness in this comparison is that the subjects sampled in the studies presented in Appendix I represent a wide range of workers, from janitors to university professors. It would have been better to compare mean scores with those of other health care administrators. Since this is the first known study of health care administrators using the JDI such a contrast was not possible. Regardless, it is concluded that MSC officers recently acquired from civilian status are highly satisfied with their jobs.

Relationship to demographics

The relationships between the demographic characteristics of the respondents and satisfaction were analyzed using the chi-square test of independence.¹ To do this, the five JDI scores were divided into four

TABLE 5
RESPONDENTS' MEAN JDI SCORES COMPARED TO WEIGHTED
AVERAGES OF MEAN JDI SCORES FROM OTHER STUDIES

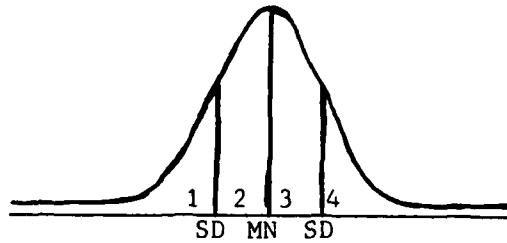
<u>Satisfaction Variable</u>	<u>Weighted Average of Mean Scores</u> ^a	<u>AF MSC Mean Scores</u>	<u>Difference</u>
Work	33.8 (n=6,698)	35.8 (n=97)	+ 2.0
Pay	21.9 (n=6,477)	32.0 (n=97)	+10.0
Promotion	22.3 (n=6,668)	37.9 (n=97)	+15.6
Supervision	36.0 (n=6,676)	42.1 (n=97)	+ 6.1
Co-Workers	35.3 (n=6,653)	41.4 (n=97)	+ 6.1

^aCalculated from studies reported in Appendix I.

categories. Table 6 shows how the scores were broken down based on means and standard deviations. For each of the satisfaction variables the scores which fall below one standard deviation less than the mean are labeled "2ND SD BELOW MN." The scores which are between the mean and one standard deviation below the mean are labeled "1ST SD BELOW MN." The scores labeled "1ST SD ABOVE MN" fall between the mean and one standard deviation above the mean. And, all the scores higher than those are labeled "2ND SD ABOVE MN." The original program was modified to breakdown the JDI scores as illustrated in Table 6, and the CROSSTABS procedure² was run on the demographic and JDI data. The procedure cross tabulated demographic variables with satisfaction variables and produced 50 contingency tables with the results

TABLE 6

BREAKDOWN OF RESPONDENTS' JDI SCORES INTO APPROPRIATE
AREAS UNDER A NORMAL CURVE BASED ON
CALCULATED MEANS AND STANDARD DEVIATIONS



AREA

LABEL

1

2ND SD BELOW MN

2

1ST SD BELOW MN

3

1ST SD ABOVE MN

4

2ND SD ABOVE MN

INCLUSIVE SCORES		A	R	E	A
		2ND SD BELOW MN	1ST SD BELOW MN	1ST SD ABOVE MN	2ND SD ABOVE MN
S A T I S F A C T I O N	WORK (MN=36, SD=9)	1-26	27-35	36-44	45-54
	PAY (MN=32, SD=10)	1-21	22-31	32-41	42-54
	PROMOTION (MN=38, SD=14)	1-23	24-37	38-51	52-54
	SUPERVISION (MN=42, SD=12)	1-29	30-41	42-53	54
	CO-WORKERS (MN=41, SD=12)	1-28	29-40	41-52	53-54

of the chi-square tests for each table. Table 7 presents a summary of this manipulation.

The null hypothesis which each of the comparisons in Table 7 tests is that the two classifications (demographic and satisfaction) represented by each box are independent, i.e., there is no statistically significant relationship between them. The alternative hypothesis is that they are not independent, and therefore there is a statistically significant relationship between them. It is understood that causality can not be demonstrated by this test. However, the rejection of the null hypothesis should lead to some speculation as to the nature of the relationship which is demonstrated.

The boxes in the Table 7 matrix provide four important bits of information relevant to the chi-square tests each represents. The bottom figure in each box is the percentage of cells which had an expected frequency of less than five responses. It has been recommended that no more than 20 percent of the cells in any one test of independence contain an expected frequency of less than five.³ It is unfortunate that so many of the tests presented in Table 7 failed to fall within this guideline. Nevertheless, they provide valuable information pertaining to the relationships between the variables.

The degrees of freedom and the computed values of chi-square associated with each test are also given in the boxes in Table 7. Most importantly, the level of significance applicable to each test is provided at the top of each box. Since this represents the probability of rejecting a true null hypothesis, the smaller this value, the more certain the researcher will be that the null hypothesis will be rejected only when it is false. The satisfaction variables will now be examined

TABLE 7
RESULTS OF CHI-SQUARE TESTS OF INDEPENDENCE BETWEEN THE
SATISFACTION AND DEMOGRAPHIC VARIABLES OF RESPONDENTS

SIGNIFICANCE ^a		CHI-SQUARE ^b											
DF ^c	% CELLS < 5 ^d	AGE	MARITAL STATUS	HIGHEST DEGREE	TYPE COURSE	TENURE AF MSC	PRIOR SERVICE	RANK	TYPE ORGN	MULT POS	POS ONE		
WORK		0.4219	0.7170	0.4783	0.1117	0.2153	0.0638 ^e	0.5327	0.6071	0.2157	0.6102		
		12.2994	1.3511	5.5265	14.3096	11.9652	7.2689	5.0874	7.2882	8.3179	21.4809		
		12	3	6	9	9	3	6	9	6	24		
		55.0	0.0	50.0	62.5	50.0	0.0	50.0	68.8	50.0	83.3		
PAY		0.4063	0.4459	0.3070	0.1737	0.8006	0.0641 ^e	0.2754	0.3004	0.8243	0.7509		
		12.5011	2.6667	7.1524	12.7623	5.3738	7.2592	7.5199	10.6503	2.8751	19.0195		
		12	3	6	9	9	3	6	9	6	24		
		55.0	0.0	50.0	56.3	50.0	0.0	41.7	68.8	50.0	83.3		
PROMO		0.1489	0.3888	0.4359	0.5148	0.6765	0.4874	0.0089 ^e	0.8338	0.8297	0.6774		
		17.0179	3.0186	5.8874	8.1932	6.6215	2.4335	17.1130	5.0063	2.8311	20.3383		
		12	3	6	9	9	3	6	9	6	24		
		55.0	0.0	50.0	62.5	50.0	0.0	50.0	68.8	50.0	83.3		
SUPRV		0.4795	0.0398 ^e	0.7679	0.9402	0.1647	0.6586	0.7503	0.0700 ^e	0.0163 ^e	0.4972		
		11.5853	8.3195	3.3187	3.5177	12.9545	1.6035	3.4525	15.8521	15.5600	23.3846		
		12	3	6	9	9	3	6	9	6	24		
		60.0	12.5	50.0	56.3	50.0	0.0	41.7	68.8	50.0	83.3		
CO-WORKERS		0.1324	0.7505	0.2492	0.8961	0.5602	0.0628 ^e	0.5028	0.0602 ^e	0.1292	0.4556		
		17.4814	1.2105	7.8507	4.2232	7.7433	7.3029	5.3252	16.3365	9.8947	24.1055		
		12	3	6	9	9	3	6	9	6	24		
		65.0	12.5	58.3	68.8	56.3	12.5	50.0	68.8	58.3	86.1		

^aThe p-value associated with the test

^bThe calculated chi-square value

^cThe applicable degrees of freedom

^dThe percentage of cells which had an expected value of less than five

^ep < .10

to see what relationships may exist with the demographic variables at $p < .10$.

Work.-- The only demographic variable that had a statistically significant relationship to work was prior service. The contingency table used in this test is presented in Appendix J, Table J-1. Only 50 percent of the no prior service respondents scored above the mean work score of 36, while 68 percent of the prior service people scored over the mean. In fact, 27 percent of those with prior service scored in the area covered by the second standard deviation above the mean, in contrast to the 23 percent of those with no prior service who scored in the second standard deviation below the mean. This clearly indicates that the respondents who had some previous active duty service were generally more satisfied with their work than those who did not.

Two possible explanations are offered as to why prior service MSC officers are more satisfied than their non-prior service counterparts. First, those who performed military service, departed the military, and subsequently decided to return to the AF, may have done so because they enjoyed the military way of life. Such people should be naturally more satisfied with their jobs than a cross section of the general public with no military experience.

The second explanation has to do with the theory of "met expectations," discussed in the last chapter. Having served in the military, the prior service respondents would probably have more realistic expectations of what the service is like than their civilian source colleagues who may have formed distorted expectations based on movies, recruiting advertisements, or service friends who might have embellished the position aspects of military life while downplaying the negative

aspects.

Pay.-- As with work, the only demographic variable that had a statistically significant relationship to pay was prior service. Table J-2 demonstrates that nearly three-fourths of the prior service subjects scored above the pay mean of 32, while only slightly over half of those with no prior service scored above the mean. Twenty-nine percent of the prior service people scored in the highly satisfied second standard deviation above the mean area, compared to 20 percent of those with no previous military service who scored in the highly dissatisfied second standard deviation below the mean area.

Here again, the theory of met expectations may be operant. Officers with previous service would have known exactly what the military pay scales were, and they would have donned the AF uniform accepting what their compensation would be. Those with no prior service, particularly those who were commissioned directly from colleges and universities with little or no previous full time work experience, may have formed unrealistic expectations of how much pay they would make as newly commissioned officers.

Another explanation for the high level of pay satisfaction among prior service officers may be related to their previous military rank. Those who were enlisted personnel during their past service would have generally experienced a significant raise in pay as officers. This raise may have surpassed even their own expectations, resulting in such high satisfaction scores with reference to compensation.

Promotion.-- Rank proved to be the only demographic characteristic significantly related to promotion opportunity, as illustrated in Table J-3. There is a definite trend toward promotion dissatisfaction as the

respondents move up through the ranks. Figure 3 demonstrates this trend.

A possible explanation of this inclination toward increasing dissatisfaction may be related to a short term perception of promotion opportunity by the officers surveyed. If they limited their focus to their next promotion only, it would be easy to understand this phenomenon. It is well known among AF officers that nearly 100 percent of all

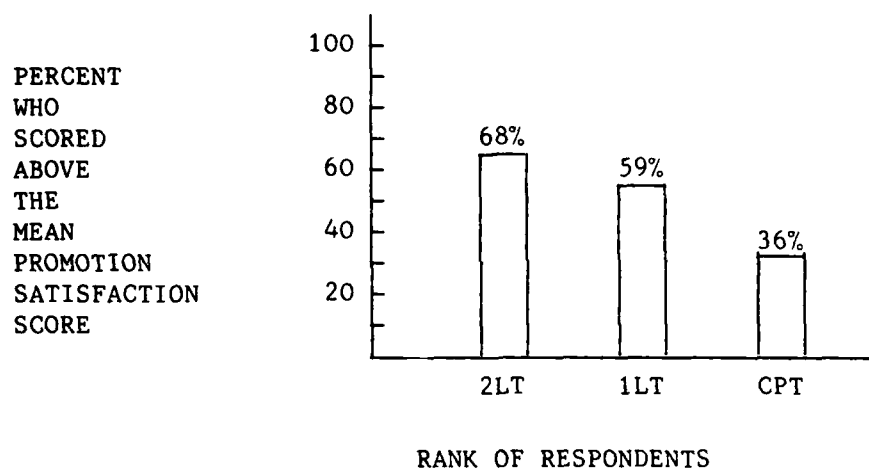


Figure 3 -- Percent of Satisfaction with Promotion by Rank of Respondents

second lieutenants are promoted to first lieutenant after two years commissioned service. Therefore, one would expect second lieutenants to be satisfied with their chances for promotion to the next higher grade. Ninety to 95 percent of all first lieutenants are promoted to captain after only two years in grade. This slightly lower probability of promotion in a short period of time may account for a lower percentage (though still a majority) of first lieutenants satisfied with their

promotion opportunity. Captains, however, experience longer waits and lower chances for promotion to major. This may account for why only a minority of the captains surveyed scored above the mean promotion satisfaction score of 38.

Supervision.-- Three demographic variables were found to be statistically related to satisfaction with supervision at $p < .10$. They were: marital status (Table J-4), type of organization (Table J-5), and multiple positions (Table J-6).

Sixty-eight percent of the married respondents scored above the mean supervision score of 42, while only 53 percent of their unmarried counterparts scored as high. Additionally, 25 percent of the unmarried officers were highly dissatisfied with supervision, while only 7 percent of the married officers had scores low enough to fall into this category. The only explanation offered for this relationship between marital status and satisfaction with supervision is that married officers may be more mature and better prepared to accept the varying amounts and types of supervision exerted over them.

A slightly higher proportion of the new MSC officers assigned to inpatient medical treatment facilities scored above the mean supervision score than did those assigned to outpatient facilities (65 versus 61 percent). The striking statistics in Table J-5 have to do with those assigned outside medical treatment organizations. Though the sample here is small, the one officer assigned to a headquarters scored within one standard deviation below the mean, and the two officers at miscellaneous organizations (research and health facilities) both scored in the highly dissatisfied second standard deviation below the mean area. Perhaps the supervisors of these individuals are not attentive enough

to their needs. MSC administrators in these types of organizations may not be as accustomed to supervising recently commissioned officers as administrators in medical treatment facilities who are assigned the bulk of such inexperienced officers.

Nearly three-fourths of the subjects who indicated that they held only one position in a medical treatment facility scored above the mean supervision score. In contrast, 58 percent of those who held more than one position scored below that mean. Twenty-three percent of the single job respondents were highly satisfied with supervision, compared to 25 percent of those holding multiple positions who were highly dissatisfied with their supervisors. These dissatisfied individuals may perceive that their assignments to more than one position is the result of poor management on the part of their superiors.

Co-Workers.-- Satisfaction with co-workers was significantly related to prior service (Table J-7) and type of organization (Table J-8). Although the split between satisfied and dissatisfied was roughly the same for prior and non-prior service officers, about 67 percent and 33 percent, the interesting statistics in Table J-7 concern the outliers. Seventeen percent of the prior service people scored in the highly satisfied area. Whereas, 21 percent of those without previous service scored in the highly dissatisfied area. Here again the met expectations concept may be applicable. Perhaps those who worked with military people in the past know what to expect from their co-workers in the AF, therefore predisposing these new officers to be more satisfied with the relationships they have established.

More subjects assigned to outpatient clinics were satisfied with their co-workers than those stationed at hospitals and medical centers

72 versus 67 percent). The headquarters respondent scored above the mean co-worker satisfaction score of 41, while both of those assigned to miscellaneous organizations scored below the mean. Once more, the extreme scores are those of interest. None of the clinic officers scored in the highly satisfied area, while 22 percent of them were highly dissatisfied. The split of highly satisfied and highly dissatisfied subjects at inpatient facilities was roughly even (15 versus 16%). Perhaps the smaller number of people assigned to outpatient clinics causes the new MSC officers assigned to them to either get along with their co-workers, or be extremely unhappy with them.

Five demographics, specifically: age, highest degree attained; type of course in which the degree was conferred; tenure in the MSC; and the main position held by officers assigned to medical treatment facilities, when tested against the five satisfaction variables, did not call for rejection of the null hypothesis at the .10 significance level. Therefore, for the MSC officers under study, there is no reason to believe that any of these demographic characteristics have any effect on their satisfaction with work, pay, promotion, supervision, or co-workers. The next section examines responses to the retention portion of the survey.

Analysis of Retention

Career intentions of respondents

The second applied research question seeks to determine if MSC officers recently obtained from civilian status will make a career of the AF MSC. Respondents were asked two questions concerning their career intentions (see Appendix A, Part III). The first question asked what

their career goal was. The second question asked how they felt they could best achieve their goal, i.e. what path did they intend to follow to attain their goal. It is recognized from the outset that the validity and reliability of the responses to these questions may be highly suspect. However, when analyzed in connection with the demographic and satisfaction variables, these responses may provide data to help answer the applied research question.

Table 8 provides a summary of the responses given to the goal and path questions. A majority (58%) indicated that they plan to become hospital administrators. Nearly all the others expect to have a health related career, other than to become hospital administrators. Many of the latter group cited other types of health administration related vocations, such as specialists in various administrative disciplines. It is important, from a retention viewpoint, that these new officers be committed to the health administration profession. Such a desire must lie at the root of every MSC officer's career aspirations because health administration is what the corps is all about. It is reasonable to assert that MSC officers who desire no connection with health administration will most probably not stay in the corps for a career. The expressed desire of so many new MSC officers to pursue hospital and health administration goals is certainly a positive retention sign.

As illustrated in Table 8, a solid majority (65%) of the respondents indicated that they intend to stay in the AF MSC for at least 15 - 25 years in order to attain their expressed goal. Sixteen percent were undecided and 13 percent planned to get out of the corps. Four percent left this question blank and did not provide any answer. Again,

TABLE 8
CAREER INTENTIONS OF RESPONDENTS

<u>GOAL</u>	<u>TOTAL FREQ</u>	<u>PERCENT</u>
Hospital Administrator	56	57.7%
Other Health Career	32	33.0
Nonhealth Career	3	3.1
Undecided	6	6.2
Total	97	100.0%

<u>PATH</u>	<u>TOTAL FREQ</u>	<u>PERCENT</u>
Stay in the AF MSC	63	64.9%
Get out of the AF MSC	13	13.4
Pursue Further Education	1	1.0
Other	1	1.0
Undecided	15	15.5
<u>Question not answered</u>	<u>4</u>	<u>4.1</u>
Total	97	100.0%

the researcher does not infer that 65 percent of those surveyed will make a career of the MSC. However, the fact that so many stated such an intention on an anonymous questionnaire to a benign peer is surely a positive retention sign.

In the next two sections, the results of crosstabulations between the retention and demographic, and retention and satisfaction variables are analyzed. In order to test the statistical significance of these relationships the chi-square test of independence was used.

Relationship to demographics

Table 9 presents a summary of the chi-square tests performed on

20 contingency tables crosstabulating the retention and demographic variables. The retention variables will now be examined to see what relationships may exist with the demographic variables, at $p < .10$.

Goal.-- Four demographic variables had significant relationships to goal plans: highest degree (Appendix K, Table K-1), tenure in the AF MSC (Table K-2), type of organization (Table K-3), and multiple positions (Table K-4).

Officers with baccalaureate and masters' degrees were fairly uniform in their preferences for hospital administration (58 percent) versus other health careers (33 percent). The conspicuous column in Table K-1 pertains to those who claim to be undecided. Those with masters' degrees are relatively less undecided about their goals than are those with bachelor or doctor degrees. Those officers with the lesser degrees may feel that they need more time and experience before they can make a definite career goal decision. Certainly the respondent with the highest academic degree should have formulated a goal which he or she has been working toward. Nevertheless, speculation on this one individual's failure to provide a career intention will not be entertained, as it would add nothing of consequence to the discussion.

The proportions of subjects with two years in the AF MSC who plan to become hospital administrators or pursue nonhealth careers are lower than their first year peers. Between these two years, as Table K-2 shows, there seems to be a shift into the other health careers and undecided columns. The third year group, on-the-other-hand is more committed to hospital administration, while neither of the respondents with more than three years intends to pursue a career in hospital

TABLE 9

RESULTS OF CHI-SQUARE TESTS OF INDEPENDENCE BETWEEN THE
RETENTION AND DEMOGRAPHIC VARIABLES OF RESPONDENTS

SIGNIFICANCE ^a											
CHI-SQUARE ^b											
DF ^c	AGE	MARITAL STATUS	HIGHEST DEGREE	TYPE COURSE	TENURE AF MSC	PRIOR SERVICE	RANK	TYPE ORGN	MULT POS	POS ONE	
% CELLS <5 ^d											
GOAL	0.1075	0.4283	0.0056 ^e	0.3961	0.0200 ^e	0.4705	0.3767	0.0001 ^e	0.0882 ^e	0.2715	
	18.2775	2.7709	18.2524	9.4581	19.6768	2.5265	6.4305	37.2889	11.0067	27.7332	
	12	3	6	9	9	3	6	9	6	24	
	70.0	50.0	66.7	75.0	75.0	50.0	58.3	75.0	66.7	77.8	
PATH TO GOAL	0.9502	0.0008 ^e	0.1694	0.3985	0.9462	0.0101 ^e	0.5774	0.9298	0.9606	0.8386	
	7.9553	19.0270	11.6119	12.6036	5.3260	13.2582	6.6268	5.7133	2.5239	24.1595	
	16	4	8	12	12	4	8	12	8	32	
	80.0	50.0	73.3	80.0	70.0	40.0	66.7	80.0	73.3	88.9	

^aThe p-value associated with the test^bThe calculated chi-square value^cThe applicable degrees of freedom^dThe percentage of cells which had an expected value of less than five^ep < .10

administration. No clear trend exists here.

Table K-3 illustrates that officers assigned to inpatient facilities are generally more interested in becoming administrators of inpatient facilities (63 percent), compared to those stationed at outpatient facilities who tend to desire other health careers (56 percent). An obvious explanation of these trends is that those working in hospitals may feel more qualified to someday become administrators of hospitals, while those in clinics may feel more comfortable outside the hospital environment.

Officers assigned multiple positions intended to become hospital administrators at a slightly higher rate than those with only one position (63 percent versus 57 percent). Perhaps they feel they will be more prepared to fulfill the multiple roles expected of hospital administrators because of their experience at handling more than one position.

Path.-- The paths respondents indicated they planned to follow to obtain their goals were statistically related to two demographic variables: marital status (Table K-5) and prior service (Table K-6).

Over 80 percent of the married respondents specifically expressed their intentions to stay in the AF MSC for a career, contrasted with only 44 percent of their unmarried colleagues. Table K-5 shows that the balance of the unmarried officers are more undecided about their path than they are about intending to get out of the corps. Here again, the higher maturity level of the married subjects may contribute to their lack of indecision when compared to those who are not married. Probably a better explanation has to do with the family responsibilities of the married respondents. The job security, health benefits,

and stable income provided by the AF may make it more attractive to married members, than to unmarried members with no family commitments.

The issue of prior service proves to be significantly related to career path intentions of surveyed MSC officers. Eighty-five percent with prior service said they plan to stay in the corps, compared to only 37 percent of those with no prior military experience who intend at this time to remain. Those with previous service who are undecided amount to only 3 percent, compared to 26 percent of those without such experience who had not yet made a decision. The importance of the met expectations concept cannot be overemphasized. Prior service was shown to be significantly related to work, pay, co-workers, and now path. It may well be that because their expectations are met, they are more satisfied, and they are therefore more committed to a career in the MSC.

Another explanation of this relationship between prior service and path may be more practical and economic. Since these officers will already have time-in-service accumulated toward retirement, they will have more to lose by getting out of the corps after their initial service commitment than those with no previous military time. Therefore, respondents with prior service would naturally be motivated to make a career of the AF MSC.

Relationship to satisfaction

Ten contingency tables crosstabulating the retention and satisfaction variables were tested to determine if any significant relationships existed. A summary of the chi-square tests performed is presented in Table 10. The only statistically significant relationship at $p \leq .10$ was the crosstabulation between path and work. The most dramatic trend

demonstrated in Appendix L, Table L-1, is the definite increase in proportions of officers who say they intend to stay in, as satisfaction with work scores go up. Figure 4 shows this trend more clearly. It should also be noted that none of the respondents whose work satisfaction scores were in the highly satisfied second standard deviation above the mean area expressed an intention to get out of the corps. This finding that the more satisfied respondents are the more likely they intend to stay in the MSC agrees with past studies of satisfaction and turnover which utilized the JDI. Recall that the only JDI scale that showed a significant correlation with turnover in those studies was the work scale. Here, satisfaction with work demonstrates a significant positive relationship with intention to stay in the MSC, i.e. as satisfaction with work increases, intention to stay in also increases. This also lends credence to Mobley, Horner, and Hollingsworth's model of the employee withdrawal decision process (Figure 1). If the path intentions expressed by the officers surveyed are transformed into reality when their initial commitments to the AF MSC are completed, satisfaction with work will have again been demonstrated to be a precursor of employee turnover.

Positive and negative factors

The second half of the retention part of the questionnaire (Appendix A) was included to give subjects an opportunity to express what they perceived would constitute their main reasons for staying in (positive factors) and getting out (negative factors) of the AF MSC. Subjects were given two short answer questions and asked to answer them clearly and concisely in their own words. Again, it is understood

TABLE 10

RESULTS OF CHI-SQUARE TESTS OF INDEPENDENCE BETWEEN
THE RETENTION AND SATISFACTION VARIABLES
OF RESPONDENTS

RETENTION	SIGNIFICANCE ^a CHI-SQUARE ^b DF ^c % CELLS <5 ^d	S A T I S F A C T I O N				
		WORK	PAY	PROMO	SUPRV	CO-WRK
RETENTION	GOAL	0.3215 10.3678 9.0 50.0	0.390 9.5279 9.0 50.0	0.9848 2.3445 9.0 50.0	0.3503 10.0020 9.0 56.3	0.6339 7.0305 9.0 56.3
	PATH TO GOAL	0.0491 ^e 21.0891 12.0 70.0	0.9295 5.7204 12.0 70.0	0.1306 17.5328 12.0 70.0	0.1996 15.8194 12.0 70.0	0.6188 9.9672 12.0 70.0

^aThe p-value associated with the test

^e_p < .10

^bThe calculated chi-square value

^cThe applicable degrees of freedom

^dThe percentage of cells which had an expected value of less than five

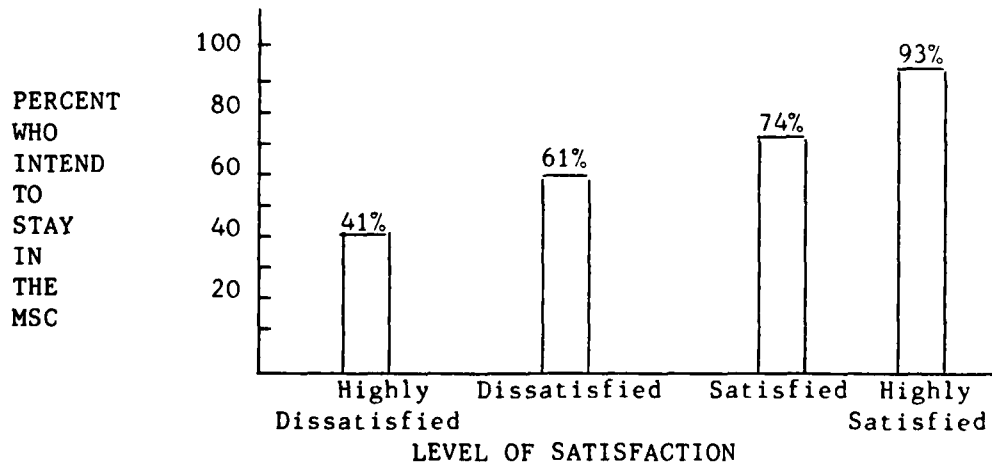


Figure 4 -- Percent of Respondents Who Intend to Stay in the MSC By Levels of Satisfaction with Work

from the outset that these answers may not be reliable or valid. Since this was the final task on the survey, respondents should have been primed to provide honest answers. However, they may have also formed biases based on other parts of the instrument.

Responses ranged from blanks to full paragraphs. Each response was evaluated and scored according to the factors and categories (Appendix F) that were most appropriate. Up to three factors were scored for each answer. In several cases where more than three factors were applicable for a single answer, only the first three factors were scored. Appendix M provides listings of the positive (Table M-1) and negative (Table M-2) factors cited by the respondents in descending order from the factors scored most frequently to least frequently. Two hundred and seventeen positive factors were cited by 46 respondents who gave three factors, 30 who gave two factors, 19 who cited only one factor, and two who left the question blank. One hundred and ninety-seven negative factors were expressed by 35 who gave three factors, 31 who provided two factors, 30 who cited only one factor, and one who did not answer the question. Of particular interest here is that nearly a third of the respondents specifically cited positive job satisfaction as a main reason for staying in, and negative job satisfaction as a main reason for getting out.

In order to understand the aspects of their jobs that are important to the respondents in terms of why they might stay in the corps or seek employment elsewhere, the factors cited were totaled according to the five JDI categories and a special military unique category. The results of these compilations are displayed in Tables 11 and 12 below.

Satisfaction with work factors were cited by over 80 percent of the respondents as reasons that might entice them to stay in the MSC. This agrees with the significant positive relationship between satisfaction with work and intention to stay in discussed in the previous section. Although a majority (59%) of those surveyed indicated that dissatisfaction with work factors might make them decide to get out, over 80 percent indicated that dissatisfaction with factors unique to

TABLE 11
POSITIVE FACTORS TOWARD STAYING IN THE
MSC CITED BY RESPONDENTS BY
JDI AND MILITARY UNIQUE CATEGORIES^a

<u>CATEGORY</u>	<u>TOTAL FREQ</u>	<u>PCT OF RESPONDENTS_b CITING FACTORS</u>
Work	81	83.5%
Military Unique	50	51.5%
Pay	46	47.4%
Promotion	32	33.0%
Co-Workers	5	5.2%
Supervision	3	3.1%

^aCompiled based on categories in Appendix F and factor frequencies in Appendix M.

^bDoes not total 100% because many respondents cited more than one factor.

the military may account for a future decision to get out of the MSC. Other than work and military unique factors, only a minority of the respondents cited factors in the other four categories as main reasons for remaining in or leaving the corps.

TABLE 12
 NEGATIVE FACTORS TOWARD GETTING OUT OF
 THE MSC CITED BY RESPONDENTS BY
 JDI AND MILITARY UNIQUE CATEGORIES^a

<u>CATEGORY</u>	<u>TOTAL FREQ</u>	<u>PCT OF RESPONDENTS CITING FACTORS</u> ^b
Military Unique	80	82.5%
Work	57	58.7%
Promotion	31	32.0%
Pay	22	22.7%
Co-Workers	4	4.1%
Supervision	3	3.1%

^aCompiled based on categories in Appendix F and factor frequencies in Appendix M.

^bDoes not total 100% because many respondents cited more than one factor.

This analysis of retention closes the chapter. The discussion addresses the significance of the response and the demographics of the respondents. Both the job satisfaction and retention data are reported and analyzed. Comparisons are made with other studies. The chi-square test of independence is used to discover and explain significant statistical relationships among the demographic, satisfaction, and retention variables. Respondents' own perceptions of why they may or may not remain in the AF MSC are presented. The last chapter concludes this paper with answers to the applied research questions, recommendations, and suggestions for further research.

FOOTNOTES

¹References for this test are contained in: Wayne W. Daniel, *Biostatistics: A Foundation for Analysis in the Health Sciences*. 2d Ed. (New York: John Wiley & Sons, 1978), pp. 352-361, and Norman H. Nie, et.al., *Statistical Package for the Social Sciences*. 2d Ed. (New York: McGraw-Hill Book Co., 1975), pp. 223-224.

²Described in Nie, et.al., pp. 218-248.

³Daniel, p. 357.

III. CONCLUSION

The purpose of this project was to answer two applied research questions: Are MSC officers recently obtained from civilian status satisfied with their jobs?, and, Will they make a career of the AF MSC? The results reported here suggest that these officers are satisfied, in general, with the five dimensions of their jobs that were studied: work, pay, promotion, supervision, and co-workers. The mean JDI scores obtained were well above the equated neutral points for each category. In addition, these scores were all higher than the weighted average mean scores of a cross section of over 6,400 subjects of past studies. In particular, this project showed that respondents with previous military service were more satisfied with their work, pay, and co-workers, than their peers with no prior service. Satisfaction with promotion decreased as the ranks of the surveyed officers increased. Married officers and those assigned only one position were more satisfied with supervision than their colleagues who were unmarried and those who filled multiple positions.

The subjects who were not assigned to medical treatment facilities were totally dissatisfied with their supervision. Clinic MSC officers were slightly more dissatisfied with their co-workers than their hospital and medical center counterparts.

With regard to the second question, the prospects for retaining at least a majority of the respondents look good. Most (58%) of the officers surveyed intend to become hospital administrators. Though

this may be an idealistic goal, it does demonstrate their commitment to hospital administration. Another third intend to pursue health related careers. The interest these officers express in hospital administration and health care in general, is a basic foundation for a career in the AF MSC. Further, 65 percent specifically stated that they plan to make a career of the corps, and an additional 15 percent had not yet made a decision. This should lead to a good retention rate among the subjects.

Two groups of respondents, in particular, have significant probabilities of remaining in the corps. Well over three-fourths (81%) of the married officers, and well over three-fourths (85%) of the subjects with prior service indicated that they plan to make careers of the AF MSC. If these officers alone do not get out after their initial commitments to the corps are completed, the retention rate for the officers included in this study will be good.

Satisfaction with work appeared to be directly related to intention to stay in the corps. The higher the work satisfaction scores, the greater the proportions of respondents who said they plan to make a career of the MSC. This was shown to agree with the findings of other studies of turnover which used the JDI to measure job satisfaction.

Based on the model of the employee withdrawal decision process presented in Figure 1, two important variables were examined: job satisfaction and intention to quit/stay. Both of these have been demonstrated to be significantly associated with actual employee turnover. Thus, it is concluded that the relatively high satisfaction scores attained by the respondents, and the expressed intention of so many to stay in the corps for a career will lead to a good retention

rate among the AF MSC officers recently acquired from civilian status.

Recommendations

The results of this project indicate that the AF MSC should continue to acquire new officers from civilian status. However, because prior service was shown to be significantly related to both higher satisfaction and greater commitment to the corps, it is recommended that this variable be keenly considered by future MSC officer selection boards.

Suggestions for future research

Two suggestions are offered for methods to approach this subject in the future. The first is that a longitudinal study be conducted. Survey instruments should be sent out at one point in time to measure satisfaction levels, intentions to stay/quit, and other precursors of turnover. After a period of time, perhaps two to five years so that officers under study have time to reach the end of their service commitments, the cohort should be resurveyed to determine if those who actually quit would have been predicted to do so based on the findings of the initial survey.

The second suggestion is that similar groups of MSC officers commissioned from civilian and military status be studied together to determine whether or not they are homogeneous. A third group of entry level civilian health administrators might also be included in such a study. Even groups of Army or Navy MSC officers could be included. A study such as this would provide a more relevant data base on which to compare satisfaction and retention of new AF MSC officers than was available for the present project.

APPENDIX A

MSC JOB SATISFACTION AND RETENTION SURVEY

PART I: DEMOGRAPHICS

The following questions will provide background information which might later be correlated with job satisfaction and retention trends. The information will not be used to identify you. Please check (✓) the appropriate response after each question.

1. What is your age? ☐ 20-25 ☐ 26-30 ☐ 31-35 ☐ 36-40 ☐ Over 40
2. What is your current marital status? ☐ Married ☐ Unmarried
3. What is your highest degree of formal education?
☐ Doctorate ☐ Master's ☐ Baccalaureate
4. In what course of study was your highest degree granted?
☐ Health Administration Related (i.e. Hospital, Health Care or Public Health Administration)
☐ Nonhealth Administration Related (i.e. Management, Business or Public Administration)
☐ Financial Related (i.e. Finance, Accounting or Economics)
☐ Other (Please Specify): _____
5. How many months have you been an Air Force Medical Service Corps officer?
☐ 0-12 ☐ 13-24 ☐ 25-36 ☐ More than 36
6. Were you ever on active duty in any of the uniformed services (officer or enlisted) prior to your commission in the Air Force Medical Service Corps?
☐ Yes ☐ No
7. What is your current rank? ☐ 2LT ☐ 1LT ☐ CPT
8. Which of the following best describes the organization to which you are currently assigned?
☐ Outpatient Medical Treatment Facility (i.e. Clinic)
☐ Inpatient Medical Treatment Facility (i.e. Hospital or Medical Center)
☐ Headquarters (i.e. Major Command, Air Staff or Department of Defense)
☐ Miscellaneous (i.e. Aeromedical Evacuation, Health Facilities Office, Medical Recruiting, Research, Professional Training or Technical Training)
☐ Other (Please Specify): _____
9. What position(s) do you currently fill? (If you are currently filling more than one of these positions on a continuing basis, check all that apply. IF YOU DO NOT WORK IN A MEDICAL TREATMENT FACILITY, SKIP THIS AND GO ON TO PART II.)

<input type="checkbox"/> Biomed Equip Repair	<input type="checkbox"/> Patient Affairs	<input type="checkbox"/> Resource Management
<input type="checkbox"/> Medical Materiel	<input type="checkbox"/> Pers & Admin Svcs	<input type="checkbox"/> Other (Please Specify): _____
<input type="checkbox"/> Med Sq Sec Cmdr	<input type="checkbox"/> Plant Management	

PART II: JOB SATISFACTION *

Please respond to each of the following with a Y, an N, or a ?. Place a Y beside an item if the item describes the particular aspect of your job which is being addressed (work, pay, etc.). Place an N beside an item if the item does not describe that aspect. Place a ? beside an item if you cannot decide whether it describes that aspect. Be sure you make an entry on every blank.

WORK

Think of your present work. How well does each of the following describe what it is like most of the time? (Y, N, or ?)

<u> </u> Fascinating	<u> </u> Good	<u> </u> Pleasant	<u> </u> Challenging	<u> </u> Endless
<u> </u> Routine	<u> </u> Creative	<u> </u> Useful	<u> </u> On your feet	<u> </u> Gives sense of
<u> </u> Satisfying	<u> </u> Respected	<u> </u> Tiresome	<u> </u> Frustrating	<u> </u> accomplishment
<u> </u> Boring	<u> </u> Hot	<u> </u> Healthful	<u> </u> Simple	

PAY

Think of the pay and compensation you now receive. How well does each of the following describe your present pay? (Y, N, or ?)

 Income adequate for
normal expenses
 Satisfactory profit sharing
 Barely live on income
 Bad
 Income provides luxuries
 Insecure
 Less than I deserve
 Highly paid
 Underpaid

PROMOTION

Think of the opportunities for promotion that you have now. How well does each of the following describe your opportunities? (Y, N, or ?)

 Good opportunity for
advancement
 Opportunity somewhat limited
 Promotion on ability
 Dead-end job
 Good chance for promotion
 Unfair promotion policy
 Infrequent promotions
 Regular promotions
 Fairly good chance for promotion

SUPERVISION

Think of the kind of supervision that you get on your job. How well does each of the following describe this supervision? (Y, N, or ?)

 Asks my advice
 Hard to please
 Impolite
 Praises good work
 Tactful
 Influential
 Up-to-date
 Doesn't supervise enough
 Quick Tempered
 Tells me where I stand
 Annoying
 Stubborn
 Knows job well
 Bad
 Intelligent
 Leaves me on my own
 Lazy
 Around when needed

CO-WORKERS

Think of the majority of the people that you work with now or people you meet in connection with your work. How well does each of the following describe these people? (Y, N, or ?)

 Stimulating
 Boring
 Slow
 Ambitious
 Stupid
 Responsible
 Fast
 Intelligent
 Easy to make enemies
 Talk too much
 Smart
 Lazy
 Unpleasant
 No privacy
 Active
 Narrow interests
 Loyal
 Hard to meet

PART III: Retention

The following questions address your future goals and intentions. Please check (✓) the appropriate response. If you check an "Other" answer, please explain your answer in your own words.

1. My goal is to:

☐ Become a hospital administrator

☐ Other (Please Specify): _____

2. I think I can best achieve my goal:

☐ By staying in the Air Force MSC for at least 15-25 years

☐ By getting some experience in the Air Force MSC and then going into the civilian health care industry after I have served less than 10 years

☐ Other (Please Specify): _____

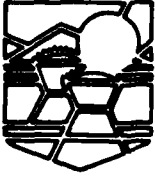
In your own words, please give clear and concise answers to the following:

3. If you were to stay in the Air Force MSC for more than 10 years, what do you think would constitute your main reasons for staying in?

4. If you were to get out of the Air Force MSC with less than 10 years served, what do you think would constitute your main reasons for getting out?

APPENDIX B

LETTER OF PERMISSION TO USE THE JDI



Bowling Green State University

Department of Psychology
Bowling Green, Ohio 43403
(419) 372-2301
Cable BGSUOH

November 8, 1982

Michael V. Ciccocioppo, Jr., Capt, USAF
USAF Academy Hospital/SGAA
USAF Academy, CO 80840

Dear. M. Ciccocioppo:

Thank you for your interest in the JDI.

Of course, we will be happy to grant you permission to reprint 134 copies of the Job Descriptive Index, and will be deeply appreciative of your return of data. We are sure you will remember to include the notation, "Copyright Bowling Green State University, 1975."

Thank you for your cooperation. Good luck in your research.

Sincerely,

Patricia C. Smith
Patricia C. Smith, Ph.D.
Professor

dc

APPENDIX C

SURVEY APPROVAL LETTER



MPCYPS

Survey Approval (Capt Ciccocioppo)

AFIT/ED

The proposed "MSC Job Satisfaction and Retention Survey" is approved and assigned a control number of USAF SCN 82-86 and expires on 1 Feb 83. Request the student provide HQ AFMPC/SG with a copy of the survey results.

FOR THE COMMANDER

A handwritten signature in cursive script, reading "Melvin B. Gambrell", is written over the typed name.

MELVIN B. GAMBRELL Maj USAF
Chief, Survey Branch

Cy to: USAF Academy Hosp/SGAA ✓

APPENDIX D

LETTER TO RESPONDENTS



DEPARTMENT OF THE AIR FORCE

USAF ACADEMY HOSPITAL
USAF ACADEMY, COLORADO 80840

22 December 1982

Dear Fellow Medical Service Corps Officer:

I am currently completing an Air Force Institute of Technology sponsored administrative residency leading to a Master of Health Administration degree. This letter is to ask you to help me complete my thesis by taking just a few minutes to complete the attached Job Satisfaction and Retention Survey. Because of your own academic background, I'm sure you understand the importance of surveys, and how critical it is to me for you to fill this out and return it. So please, read on.

As you may or may not know, in past years relatively few new MSC officers joined the Corps directly from civilian life. Most were selected from the enlisted ranks. Some came from other officer career fields. Over the years, many of these prior service MSC officers retired when they were eligible to do so. This meant that they only spent 10-15 years in the MSC. The result has been a significant shortfall of MSC officers in the Lt Colonel and Colonel grades. To correct this problem, emphasis has shifted to recruiting qualified people like you into the MSC directly from civilian life, assuming that you will make a career of the Air Force and someday fill those senior officer positions.

Though it is early in your career, the senior leaders of the MSC are interested in knowing if indeed you are satisfied with your present job, and if you do intend to remain in the MSC. That's where I come into the picture. My thesis, "A Job Satisfaction and Retention Study of Air Force Medical Service Corps Officers Recently Acquired from Civilian Sources," will attempt to answer these questions. My findings may be used in the future to formulate Air Force policies pertaining to the acquisition and use of new MSC officers. That is why I badly need your input into my study.

You, and all other officers selected for commission from civilian status in the MSC between June 1980 - June 1982, are being asked to complete and return this survey in the enclosed self-addressed stamped envelope no later than 17 January 1983. I guarantee you complete anonymity. Your responses will be fed into a computer and tabulated with your peers to help me determine if any job satisfaction or retention trends exist. Thanks for your help and cooperation.

Sincerely

A handwritten signature in dark ink, appearing to read "Mike".

MICHAEL V. CICCOCIOPPO, JR., Capt, USAF, MSC
Administrative Resident

1 Atch
Survey Form

APPENDIX E

PART I: SCORING KEY

PART I: SCORING KEY

1. Age: 1 = 20-25 2 = 26-30 3 = 31-35 4 = 36-40 5 = Over 40
2. Marital Status: 1 = Married 2 = Unmarried
3. Highest Degree: 1 = Doctorate 2 = Master's 3 = Baccalaureate
4. Course: 1 = Health Administration Related 3 = Financial Related
 2 = Nonhealth Administration Related 4 = Other
5. Months as AF MSC: 1 = 0-12 2 = 13-24 3 = 25-36 4 = More than 36
6. Prior Service: 1 = Yes 2 = No
7. Rank: 1 = 2LT 2 = 1LT 3 = CPT
8. Type Organization: 1 = Outpatient 4 = Miscellaneous
 2 = Inpatient 5 = Other
 3 = Headquarters
9. Position: 1 = Biomed Equip Repair 6 = Plant Management
 2 = Medical Materiel 7 = Resource Management
 3 = Med Sq Sec Cmdr 8 = Other
 4 = Patient Affairs 9 = N/A Because Not Assigned to
 5 = Pers & Admin Svcs a Medical Treatment Facility

Multiple Positions (Based on the answer to question 9, does the officer hold more than one position in a Medical Treatment Facility?):

- 1 = No 2 = Yes 3 = Doesn't Apply

APPENDIX F

PART III: SCORING KEY

PART III: SCORING KEY

1. Goal: 1 = Hospital Administrator 3 = Nonhealth Related Career
2 = Other Health Related Career 4 = Undecided
2. Path to Goal: 1 = Stay in the AF MSC 4 = Other
2 = Get Out of the AF MSC 5 = Undecided
3 = Further Education
3. Positive Factors, main reasons for staying in the AF MSC:

<u>WORK</u>	<u>PAY/COMPENSATION</u>
1 = Positive Job Satisfaction	5 = Positive Pay Considerations
2 = Positive Work Environment	6 = Retirement Benefits
3 = Positive Job Responsibilities	7 = Overall Military Benefits
4 = Positive Job Security	8 = Education Opportunities
<u>PROMOTION</u>	<u>SUPERVISION</u>
9 = Positive Promotion Opportunity	12 = Positive Supervisor Considerations
10 = Good Chance to Become a Hospital Administrator	<u>COWORKERS</u>
11 = Desire to Become a Hospital Commander	13 = Positive Coworker Considerations
<u>MILITARY UNIQUE</u>	
14 = Patriotism	
15 = Negative Outside Economic Conditions	
16 = Positive Travel & Assignment Opportunities	
17 = Positive Lifestyle Considerations	
18 = Positive Family Considerations	
19 = Positive Military People Considerations	
4. Negative Factors, main reasons for getting out of the AF MSC:

<u>WORK</u>	
20 = Negative Work Environment	24 = Poor Performance Evaluation System
21 = Negative Job Responsibilities	25 = Lack of Support Personnel
22 = Lack of Job Control	26 = Lack of Resources
23 = Too Much Politics	27 = Negative Job Satisfaction
<u>PAY/COMPENSATION</u>	<u>PROMOTION</u>
28 = Erosion of Benefits	30 = Poor Chance to Become Hosp Administrator
29 = Negative Pay Considerations	31 = Poor Chance to Become Hosp Commander
	32 = Negative Promotion Opportunities
<u>SUPERVISION</u>	<u>COWORKERS</u>
33 = Negative Supervisor Considerations	34 = Negative Coworker Considerations
<u>MILITARY UNIQUE</u>	
35 = Better Civilian Job Opportunities	
36 = A Good Civilian Job Offer	
37 = Negative Travel & Assignment Opportunities	
38 = Negative Family Considerations	
39 = If Forced Out By the Air Force	
40 = Negative Aspects of the Military System	

APPENDIX G

SURVEY RESPONSE SHEET

SURVEY RESPONSE SHEET

[illegible]

APPENDIX H

DEMOGRAPHICS OF RESPONDENTS

DEMOGRAPHICS OF RESPONDENTS

Page 1 of 8

AGE	CODE	AGE	TABLE H-1
		I	
	1.	***** (19) 19.6%	
		I 20-25	
		I	
		I	
	2.	***** (33) 34.0%	
		I 26-30	
		I	
		I	
	3.	***** (35) 36.1%	
		I 31-35	
		I	
		I	
	4.	***** (8) 8.2%	
		I 36-40	
		I	
		I	
	5.	** (1) 1.0%	
		I OVER 40	
		I	
		I	
	0.	** (1) 1.0%	
(MISSING)		I	
		I	
		I.....I.....I.....I.....I.....I	
		0 10 20 30 40 50	
		FREQUENCY	

MAR	CODE	MARITAL STATUS	TABLE H-2
		I	
	1.	***** (60) 61.9%	
		I MARRIED	
		I	
		I	
	2.	***** (36) 37.1%	
		I UNMARRIED	
		I	
		I	
	0.	** (1) 1.0%	
(MISSING)		I	
		I	
		I.....I.....I.....I.....I.....I	
		0 20 40 60 80 100	
		FREQUENCY	

DEMOGRAPHICS OF RESPONDENTS

Page 2 of 8

DGR

HIGHEST DEGREE

TABLE H-3

CODE

```

I
1. ** ( 1) 1.0%
I DOCTORATE
I
I
2. ***** ( 71) 73.2%
I MASTERS
I
I
3. ***** ( 25) 25.8%
I BACCALAURETE
I
I.....I.....I.....I.....I.....I
0          20          40          60          80          100
FREQUENCY

```

CRS

COURSE OF STUDY

TABLE H-4

CODE

```

I
1. ***** ( 63) 64.9%
I HLTH ADMIN
I
I
2. ***** ( 25) 28.9%
I NONHLTH ADMIN
I
I
3. *** ( 4) 4.1%
I FIN
I
I
4. ** ( 2) 2.1
I UTHR (MS in Audiology & BA Sociology)
I
I.....I.....I.....I.....I.....I
0          20          40          60          80          100
FREQUENCY

```

DEMOGRAPHICS OF RESPONDENTS

Page 3 of 8

TNR MOS AS AF MSC TABLE H-5

CODE

```

I
1. ***** (      46) 47.
I  0-12 MOS
I
I
2. ***** (      44) 45.4%
I  13-24 MOS
I
I
3. ***** (      5) 5.2%
I  25-36 MOS
I
I
4. *** (      2) 2.1%
I  OVER 36
I
I.....I.....I.....I.....I.....I
0          10          20          30          40          50
FREQUENCY

```

SVC PRIOR SERVICE TABLE H-6

CODE

```

I
1. ***** (      41) 42.3%
I  PRIOR SVC
I
I
2. ***** (      56) 57.7%
I  NO PRIOR SVC
I
I.....I.....I.....I.....I.....I
0          20          40          60          80          100
FREQUENCY

```

RNK CURRENT RANK TABLE H-7

CODE

```

I
1. ***** (      28) 28.9%
I  2LT
I
I
2. ***** (      58) 59.8%
I  1LT
I
I
3. ***** (      11) 11.3%
I  CPT
I
I.....I.....I.....I.....I.....I
0          20          40          60          80          100
FREQUENCY

```

DEMOGRAPHICS OF RESPONDENTS

Page 4 of 8

ORG

TYPE ORGN ASSIGNED TO

TABLE H-8

CODE

```

I
1. ***** ( 18 ) 18.6%
I  OUTPT
I
I
2. ***** ( 76 ) 78.4%
I  INPT
I
I
3. ** ( 1 ) 1.0%
I  HQ
I
I
4. ** ( 2 ) 2.1%
I  MISC (Research Administration & Health Facilities Office)
I
I.....I.....I.....I.....I.....I
0          20          40          60          80          100
FREQUENCY

```

MPS

MULTIPLE POSITIONS

TABLE H-9

CODE

```

I
1. ***** ( 70 ) 72.2%
I  ONE POSITION
I
I
2. ***** ( 24 ) 24.7%
I  MORE THAN 1 POS
I
I
3. *** ( 3 ) 3.1%
I  NA
I
I.....I.....I.....I.....I.....I
0          20          40          60          80          100
FREQUENCY

```

FIRST POSITION

TABLE H-10

CODE

1

1. ** (1) 1.0%

I BIOMED EQUIP

I

I

2. ★★★★★★★★★★ (13) 13.4%

I MED

MTRL

I

I

3. ***** (23) 23.7%

I SG CMOR

J

I

4. ***** (26) 26.8%

I PR AFFAIRS

1

I

5. ** (1) 1.0%

1 PERS & ADMIN

i

I

6. ★★★★★ (3) 3.1%

PLANT MGMT

I

1

7. ★★★★★★ (11) 11.3%

RMS

8. ★★★★★★★★★★★★★★ (16) 16.5%

OTHER

9. **** (3) 3.1%

NA

1 1 1 1 1 1
0 10 20 30 40 50

FREQUENCY

DEMOGRAPHICS OF RESPONDENTS

Page 6 of 8

TWO CODE SECOND POSITION TABLE H-11

TWO CODE	SECOND POSITION	TABLE H-11
1.	** (2)	2.1%
	I BIOMED EQUIP	
	I	
	I	
2.	** (1)	1.0%
	I MED MTRL	
	I	
	I	
3.	** (2)	2.1%
	I S- CMDR	
	I	
	I	
4.	** (2)	2.1%
	I PT AFFAIRS	
	I	
	I	
5.	***** (10)	10.3%
	I PERS & ADMIN	
	I	
	I	
7.	** (2)	2.1%
	I RND	
	I	
	I	
8.	**** (5)	5.2%
	I OTHER	
	I	
	I	
9.	*** (3)	3.1%
	I NA	
	I	
	I	
0.	***** (70)	72.2%
(MISSING)	I DID NOT INDICATE MORE THAN ONE POSITION	
	I	
	I.....I.....I.....I.....I.....I.....I	
	0 20 40 60 80 100	
	FREQUENCY	

DEMOGRAPHICS OF RESPONDENTS

Page 7 of 8

THR	THIRD POSITION	TABLE H-12
CODE		
	I	
4.	** (1) 1.0%	
	I PT AFFAIRS	
	I	
	I	
5.	** (1) 1.0%	
	I PERS & ADMIN	
	I	
	I	
6.	*** (3) 3.1%	
	I PLANT MGMT	
	I	
	I	
8.	** (1) 1.0%	
	I OTHER	
	I	
	I	
9.	*** (3) 3.1%	
	I NA	
	I	
	I	
0.	***** (88) 90.7%	
(MISSING)	I DID NOT INDICATE MORE THAN TWO POSITIONS	
	I	
	I.....I.....I.....I.....I.....I.....I	
	0 20 40 60 80 100	
	FREQUENCY	

DEMOGRAPHICS OF RESPONDENTS

Page 8 of 8

SUMMARY OF ALL POSITIONS

TABLE H-13

<u>Position</u>	<u>Total Freq</u>	<u>Percent</u>
Pt Affairs	29	22.8%
Sq Cmdr	25	19.8%
Other ^a	22	17.3%
Med Mtrl	14	11.0%
RMO	13	10.2%
Pers & Admin	12	9.4%
Plant Mgmt	6	4.7%
Biomed Equip	3	2.4%
NA (Non MTF MSCs)	3	2.4%
Total	127	100.0%

^a Other Positions Specified

	<u>Total Freq</u>
Medical Readiness/Plans Officer	8
Administrator of a Clinical Department	7
Administrator, Aeromedical Staging Flight	1
Administrator, Air Transportable Hospital	1
Medical Systems Analyst	1
Hospital Renovation Project Officer	1
Military Construction Program Communications Officer	1
Administrative Resident	1
Overage - Rotating Among Positions	1
Total	22

APPENDIX I
MEANS AND STANDARD DEVIATIONS OF
JDI SCORES FROM SPECIFIED STUDIES

MEANS AND STANDARD DEVIATIONS OF
JDI SCORES FROM SPECIFIED STUDIES

SUBJECTS (n=sample size)	STAT	S A T I S F A C T I O N				
		WORK	PAY	PROMO	SUPRV	CO-WRK
1. Male Employees at 21 Plants (WRKn=1,971;PAYn=1,966; PRMn=1,945;SPRn=1,951;& COWn=1,928)	MN SD	36.6 10.5	29.9 14.5	22.1 15.8	41.1 10.6	43.5 10.0
2. Female Employees at 21 Plants (WRKn=638;PAYn=635;PRMn=634; SPRn & COWn=636)	MN SD	35.7 9.9	27.9 13.7	17.8 13.4	41.1 10.1	42.1 10.5
3. Nurses at Five Hospitals (n=880,except PAYn=667)	MN SD	35.0 9.4	17.2 14.1	41.3 11.6	41.6 11.3	27.2 13.8
4. Employees at One Hospital (n=203)	MN SD	35.9 10.5	20.5 13.8	17.3 13.0	42.2 10.3	42.2 11.1
5. Male Professors at One Univ. (n=51)	MN SD	38.4 8.6	11.6 7.3	12.7 9.0	42.4 12.0	40.4 12.3
6. Female Professors at One Univ. (n=51)	MN SD	35.2 10.1	13.4 6.6	13.0 8.6	37.0 12.7	35.4 12.1
7. Employees at Large Soft-Goods (n=2,261) Company	MN SD	29.4 6.6	14.9 4.1	18.8 5.6	25.4 7.0	26.8 6.3
8. Female Clerical Workers at One (n=345) Company	MN SD	35.3 N o t	15.0 R e p	10.8 o r t	41.5 e d	40.9
9. Female Clerical Workers at One (n=298) Company	MN SD	36.1 N o t	32.8 R e p	24.6 o r t	43.5 e d	43.2

SOURCES: 1.&2. P. C. Smith, L. M. Kendall, & C. L. Hulin, The Measurement of Satisfaction in Work and Retirement (Chicago: Rand McNally & Co., 1969), p. 80; 3. Personal correspondence from Steve Johnson, Bowling Green State University, OH, March 21, 1983; 4. W. H. Mobley, S.O. Horner, & A.T. Hollingsworth, "An Evaluation of Precursors of Hospital Employee Turnover." Journal of Applied Psychology 63 (August 1978): 411; 5.&6. D.B. Smith & W. T. Plant, "Sex Differences in the Job Satisfaction of University Professors." Journal of Applied Psychology 67 (April 1982): 250; 7. S.J. Yeager, "Dimensionality of the Job Descriptive Index." Academy of Management Journal 24 (March 1981): 210; 8.&9. C.L. Hulin, "Effects of Changes in Job-Satisfaction Levels on Employee Turnover." Journal of Applied Psychology 52 (April 1968): 124.

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JOB SATISFACTION AND RETENTION OF AIR FORCE MEDICAL
SERVICE CORPS OFFICER. (U) AIR FORCE INST OF TECH
WRIGHT-PATTERSON AFB OH M V CICCOCIOPPO AUG 83

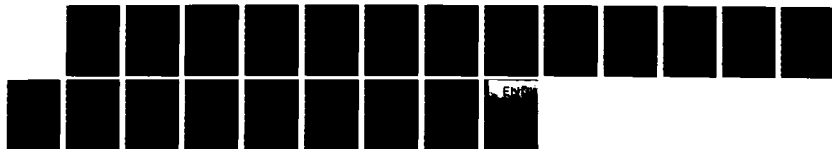
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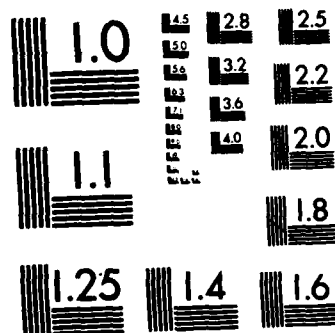
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NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

APPENDIX J

SIGNIFICANT CROSSTABULATIONS

BETWEEN DEMOGRAPHIC AND

SATISFACTION VARIABLES

SIGNIFICANT CROSSTABULATIONS BETWEEN DEMOGRAPHIC AND
SATISFACTION VARIABLES

Page 1 of 4

TABLE J-1 WORK BY PRIOR SERVICE

		WRK								
		COUNT	1ST SD		2ND SD		3RD SD		ROW	
		ROW PCT	BELOW MN	BELOW MN	ABOVE MN	ABOVE MN	ABOVE MN	ABOVE MN	TOTAL	
		TOT PCT	1.1	2.1	3.1	4.1	5.1	6.1		
SVC										
	1.	4	9	17	11				41	
PRIOR SVC		9.3	22.0	41.5	26.8				42.3	
	I	23.5	37.5	42.5	28.5					
	I	4.1	9.3	17.5	11.3					
	2.	13	15	23	5				56	
NO PRIOR SVC		23.2	26.8	41.1	8.9				57.7	
	I	70.5	62.5	57.5	31.3					
	I	13.4	15.5	23.7	5.2					
	COLUMN	17	24	40	16				97	
	TOTAL	17.5	24.7	41.2	16.5				100.0	

$$\chi^2_{(3)} = 7.3, p < .06$$

TABLE J-2 PAY BY PRIOR SERVICE

		PAY									
COUNT	I	1ST SD		1ST SD		2ND SD		ROW			
ROW PCT	I	2ND SD	1ST SD	1ST SD	2ND SD	2ND SD	2ND SD	ROW			
COL PCT	I	BELOW MN	BELOW MN	ABOVE MN	ABOVE MN	ABOVE MN	ABOVE MN	TOTAL			
TOT PCT	I	1.1	2.1	3.1	4.1	5.1	6.1				

PRIOR SVC	1.	I	5	I	6	I	13	I	41		
		I	12.2	I	14.6	I	43.9	I	29.3	I	42.3
		I	31.3	I	27.3	I	43.9	I	60.7	I	
		I	5.2	I	6.2	I	12.6	I	12.4	I	

NO PRIOR SVC	2.	I	11	I	16	I	23	I	6	I	56
		I	19.6	I	28.6	I	41.1	I	10.7	I	57.7
		I	68.9	I	72.7	I	56.1	I	33.3	I	
		I	11.3	I	15.5	I	23.7	I	6.2	I	

COLUMN		16	22	41	18	97					
TOTAL		16.5	22.7	42.3	18.0	100.0					

$$\chi^2_{(3)} = 7.3, p < .06$$

SIGNIFICANT CROSSTABULATIONS BETWEEN DEMOGRAPHIC AND
SATISFACTION VARIABLES

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TABLE J-3 PROMOTION BY RANK

RNK	COUNT					ROW TOTAL
	ROW PCT	2ND SD	1ST SD	1ST SD	2ND SD	
	COL PCT	BELOW MN	BELOW MN	ABOVE MN	ABOVE MN	
	TOT PCT	1.1	1.1	3.1	4.1	
2LT	1.	3	6	11	9	29
		10.7	21.4	39.3	28.6	28.9
		17.6	26.1	26.8	50.0	
		3.1	6.2	11.3	8.2	
1LT	2.	8	16	28	6	58
		13.8	27.6	48.3	10.3	59.3
		47.1	69.6	68.3	37.5	
		8.2	16.5	28.9	6.2	
CPT	3.	6	1	2	2	11
		54.5	9.1	18.2	18.2	11.3
		35.3	4.3	4.9	12.5	
		6.2	1.0	2.1	2.1	
COLUMN		17	23	41	18	99
TOTAL		17.5	23.7	42.3	10.5	100.0

$$\chi^2_{(6)} = 17.1, p < .01$$

TABLE J-4 SUPERVISION BY MARITAL STATUS

MAR	COUNT					ROW TOTAL
	ROW PCT	1ST SD	1ST SD	2ND SD	2ND SD	
	COL PCT	BELOW MN	BELOW MN	ABOVE MN	ABOVE MN	
	TOT PCT	1.1	2.1	3.1	4.1	
MARRIED	1.	4	19	31	10	64
		6.7	25.0	51.7	16.7	62.5
		30.2	55.2	73.8	55.6	
		4.2	11.5	32.3	10.4	
UNMARRIED	2.	9	2	11	8	30
		25.0	20.2	30.6	22.2	37.5
		69.2	34.8	26.7	44.4	
		9.4	1.5	11.5	8.3	
COLUMN		13	23	42	18	96
TOTAL		13.5	24.0	43.8	18.8	100.0

$$\chi^2_{(3)} = 8.3, p < .04$$

SIGNIFICANT CROSSTABULATIONS BETWEEN DEMOGRAPHIC AND
SATISFACTION VARIABLES

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TABLE J-5 SUPERVISION BY TYPE ORGN

ORG	COUNT						ROW TOTAL
	1ST SD	1ST SD	1ST SD	2ND SD	2ND SD	2ND SD	
	BELOW MN	BELOW MN	BELOW MN	ABOVE MN	ABOVE MN	ABOVE MN	
	TOT PCT	1.1	0.0	3.1	4.1		
OUTPT	1.	3	4	7	4		18
		16.7	22.2	33.3	22.2		100.0
		21.4	17.4	16.7	22.2		
		3.1	4.1	7.2	4.1		
INPT	2.	9	18	35	14		76
		11.8	23.7	46.1	18.4		100.0
		64.3	78.3	83.3	77.8		
		9.3	18.6	36.1	14.4		
HQ	3.	0	1	0	0		1
		0.0	100.0	0.0	0.0		100.0
		0.0	4.3	0.0	0.0		
		0.0	1.0	0.0	0.0		
MISC	4.	0	0	0	0		2
		0.0	0.0	0.0	0.0		0.0
		14.3	0.0	0.0	0.0		
		2.1	0.0	0.0	0.0		
COLUMN TOTAL		14	23	42	18		97
TOTAL		14.4	23.7	43.3	18.6		100.0

$$\chi^2_{(9)} = 15.9, p < .07$$

TABLE J-6 SUPERVISION BY MULTIPLE POSITIONS

MPS	COUNT						ROW TOTAL
	1ST SD	1ST SD	1ST SD	2ND SD	2ND SD	2ND SD	
	BELOW MN	BELOW MN	BELOW MN	ABOVE MN	ABOVE MN	ABOVE MN	
	TOT PCT	1.1	0.1	3.1	4.1		
ONE POSITION	1.	6	14	34	16		70
		0.0	20.0	48.6	22.9		100.0
		42.9	30.9	31.0	30.9		
		0.0	14.4	35.1	10.5		
MORE THAN 1 POS	2.	0	2	0	0		2
		0.0	30.0	33.3	8.3		100.0
		42.9	34.8	10.0	11.1		
		0.0	0.0	0.0	0.0		
NA	3.	0	1	0	0		3
		0.0	33.3	0.0	0.0		100.0
		14.3	4.3	0.0	0.0		
		2.1	1.0	0.0	0.0		
COLUMN TOTAL		14	23	42	18		97
TOTAL		14.4	23.7	43.3	18.6		100.0

$$\chi^2_{(6)} = 15.6, p < .02$$

SIGNIFICANT CROSSTABULATIONS BETWEEN DEMOGRAPHIC AND
SATISFACTION VARIABLES

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TABLE J-7 COWORKERS BY PRIOR SERVICE

COW									
COUNT									
ROW	PCT	12ND SD	1ST SD	1ST SD	2ND SD	ROW	PCT	12ND SD	1ST SD
COL	PCT	BELOW MN	BELOW MN	ABOVE MN	ABOVE MN	COL	PCT	BELOW MN	ABOVE MN
TOT	PCT	I	1.1	2.1	3.1	TOT	PCT	I	4.1
-----I-----									

$$\chi^2_{(3)} = 7.3, p < .06$$

TABLE J-8 COWORKERS BY TYPE ORGN

		COW				
COUNT		12ND SD	1ST SD	1ST SD	2ND SD	ROW
ROW PCT		BELOW MN	BELOW MN	ABOVE MN	ABOVE MN	TOTAL
COL PCT						
TOT PCT		1.1	2.1	3.1	4.1	
ORG						
OUTPI	1.	9	1	13	0	15
		22.2	5.6	72.2	0.0	15.6
		25.0	5.3	24.1	0.0	
		4.1	1.0	13.4	0.0	
INPT	2.	12	13	40	11	76
		15.6	17.1	52.6	14.5	78.4
		75.0	21.3	74.1	100.0	
		12.4	10.4	41.2	11.3	
HQ	3.	0	0	1	0	1
		0.0	0.0	100.0	0.0	1.0
		0.0	0.0	1.0	0.0	
		0.0	0.0	1.0	0.0	
MISC	4.	0	0	0	0	2
		0.0	100.0	0.0	0.0	2.1
		0.0	10.5	0.0	0.0	
		0.0	0.1	0.0	0.0	
COLUMN		16	16	54	11	97
TOTAL		16.5	16.5	55.7	11.3	100.0

$$\chi^2_{(9)} = 16.3, p < .06$$

APPENDIX K
SIGNIFICANT CROSSTABULATIONS
BETWEEN DEMOGRAPHIC AND
RETENTION VARIABLES

SIGNIFICANT CROSSTABULATIONS BETWEEN DEMOGRAPHIC AND
RETENTION VARIABLES

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TABLE K-1 GOAL BY HIGHEST DEGREE

GOAL											
DGR	COUNT	I								ROW COL TOT	PCT PCT PCT
	ROW	PCT	I	HOSP	ADM	OTHER	HL	NONHLTH	UNDECIDE		
	COL	PCT	I	INSTRAT	TH	CAREE	CAREE	D			
	TOT	PCT	I	1.1	2.1	3.1	4.1				
			I	I	I	I	I	I	I	I	
DOCTORATE	1.	I	0	I	0	I	0	I	1	I	
		I	0.0	I	0.0	I	0.0	I	100.0	I	
		I	0.0	I	0.0	I	0.0	I	10.7	I	
		I	0.0	I	0.0	I	0.0	I	1.0	I	
			I	I	I	I	I	I	I	I	
MASTERS	2.	I	42	I	25	I	2	I	2	I	
		I	59.2	I	35.2	I	2.3	I	2.9	I	
		I	75.0	I	78.1	I	69.7	I	33.3	I	
		I	43.3	I	25.8	I	2.1	I	2.1	I	
			I	I	I	I	I	I	I	I	
BACCALAURETE	3.	I	14	I	7	I	1	I	3	I	
		I	56.0	I	28.0	I	4.0	I	12.0	I	
		I	25.0	I	21.9	I	33.3	I	50.0	I	
		I	14.4	I	7.2	I	1.0	I	3.1	I	
			I	I	I	I	I	I	I	I	
	COLUMN		56		32		3		6		
	TOTAL		57.7		33.0		3.1		6.2		
										97	
										100.0	

$$\chi^2_{(6)} = 18.3, p < .01$$

TABLE K-2 GOAL BY TENURE IN AF MSC

		GOAL										
		ROW	PCT	HOSP	ADM	OTHER	HL	NONHLTH	UNDECIDE	PCT		
		COL	PCT	INSTR	STRAT	IN	CAREER	CAREER	D	TOTAL		
		TOT	PCT	I		1.1		2.1		3.1	4.1	
0-12 MOS	1.	I	20	I		14	I	2	I	2	I	46
		I	51.9	I		30.4	I	4.3	I	4.3	I	47.4
		I	50.0	I		43.0	I	69.7	I	73.3	I	
		I	20.0	I		14.4	I	2.1	I	2.1	I	
13-24 MOS	2.	I	24	I		18	I	0	I	4	I	44
		I	51.9	I		30.4	I	0.0	I	0.0	I	45.0
		I	42.0	I		30.0	I	0.0	I	0.0	I	
		I	24.7	I		18.0	I	0.0	I	4.1	I	
25-30 MOS	3.	I	4	I		1	I	0	I	0	I	5
		I	10.0	I		0.0	I	0.0	I	0.0	I	5.0
		I	7.1	I		3.1	I	0.0	I	0.0	I	
		I	4.1	I		1.0	I	0.0	I	0.0	I	
OVER 30	4.	I	0	I		1	I	1	I	0	I	0
		I	0.0	I		0.0	I	0.0	I	0.0	I	0.1
		I	0.0	I		3.1	I	33.3	I	0.0	I	
		I	0.0	I		1.0	I	1.0	I	0.0	I	
COLUMN			56			32		3		6		97
TOTAL			57.7			33.0		3.1		6.2		100.0

$$\chi^2_{(9)} = 19.7, p < .02$$

SIGNIFICANT CROSSTABULATIONS BETWEEN DEMOGRAPHIC AND
RETENTION VARIABLES

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TABLE K-3 GOAL BY TYPE ORGN

		GOL						
		COUNT	I					
		ROW PCT	IHOSE	ADM	OTHER	HL	NONHLTH	UNDECIDE
		COL PCT	IINISTRAT	TH	CAREE	CAREE		D
		TOT PCT	I	1.1	2.1	3.1	4.1	
ORG								
OUTPT	1.	I	7	I	10	I	0	I
		I	32.9	I	55.6	I	0.0	I
		I	12.5	I	31.3	I	0.0	I
		I	7.0	I	10.3	I	0.0	I
INPT	2.	I	48	I	21	I	2	I
		I	33.2	I	27.5	I	2.6	I
HQ	3.	I	0	I	0	I	1	I
		I	0.0	I	0.0	I	100.0	I
		I	0.0	I	0.0	I	33.3	I
		I	0.0	I	0.0	I	1.0	I
MISC	4.	I	1	I	1	I	0	I
		I	50.0	I	50.0	I	0.0	I
		I	1.0	I	3.1	I	0.0	I
		I	1.0	I	1.0	I	0.0	I
COLUMN TOTAL			56		32		3	
			57.7		33.0		3.1	

$$\chi^2_{(9)} = 37.3, p < .001$$

TABLE K-4 GOAL BY MULTIPLE POSITIONS

		GOL						
		COUNT	I					
		ROW PCT	IHOSE	ADM	OTHER	HL	NONHLTH	UNDECIDE
		COL PCT	IINISTRAT	TH	CAREE	CAREE		D
		TOT PCT	I	1.1	2.1	3.1	4.1	
MPS								
ONE POSITION	1.	I	40	I	25	I	1	I
		I	57.1	I	35.7	I	1.4	I
		I	71.4	I	70.1	I	33.3	I
		I	41.0	I	20.0	I	1.0	I
MORE THAN 1 POS	2.	I	15	I	6	I	1	I
		I	21.4	I	20.0	I	4.2	I
		I	25.0	I	10.0	I	33.3	I
		I	15.0	I	0.0	I	1.0	I
NA	3.	I	1	I	1	I	1	I
		I	33.3	I	33.3	I	33.3	I
		I	1.0	I	3.1	I	33.3	I
		I	1.0	I	1.0	I	1.0	I
COLUMN TOTAL			56		32		3	
			57.7		33.0		3.1	

$$\chi^2_{(6)} = 11.0, p < .09$$

SIGNIFICANT CROSSTABULATIONS BETWEEN DEMOGRAPHIC AND
RETENTION VARIABLES

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TABLE K-5 PATH BY MARITAL STATUS

		PTH											
COUNT		I											
ROW	PCT	1	STAY IN	GET OUT	FURTHER	OTHER	UNDECIDE	ROW					
COL	PCT	I			ED		D		TOTAL				
TOT	PCT	1	1.1	2.1	3.1	4.1	5.1						
MAR		I	I	I	I	I	I	I					
MARRIED	1.	I	47	I	7	I	1	I	0	I	3	I	58
		I	81.0	I	12.1	I	1.7	I	0.0	I	5.2	I	63.0
		I	75.0	I	53.3	I	100.0	I	0.0	I	20.0	I	
		I	51.1	I	7.6	I	1.1	I	0.0	I	3.3	I	
		I	I	I	I	I	I	I	I	I	I	I	
UNMARRIED	2.	I	15	I	6	I	0	I	1	I	12	I	34
		I	44.1	I	17.6	I	0.0	I	2.9	I	35.3	I	37.0
		I	24.2	I	46.2	I	0.0	I	100.0	I	80.0	I	
		I	15.3	I	6.5	I	0.0	I	1.1	I	13.0	I	
		I	I	I	I	I	I	I	I	I	I	I	
COLUMN			62		13		1		1		15		92
TOTAL			57.4		14.1		1.1		1.1		15.3		100.0

$$\chi^2_{(4)} = 19.0, p < .001$$

TABLE K-6 PATH BY PRIOR SERVICE

PTH													
COUNT													
ROW	PCT	STAY IN	GET OUT	FURTHER	OTHER	UNDECIDE	ROW						
COL	PCT	I	I	ED	I	D	TOTAL						
TOT	PCT	I	1.1	2.1	3.1	4.1	5.1						

PRIOR SVC	1.	I	35	I	4	I	1	I	0	I	1	I	39
		I	4.6	I	10.5	I	2.6	I	0.0	I	2.5	I	41.9
		I	52.4	I	30.8	I	100.0	I	0.0	I	0.7	I	
		I	35.5	I	4.3	I	1.1	I	1.0	I	1.1	I	

NO PRIOR SVC	2.	I	30	I	9	I	0	I	1	I	14	I	54
		I	55.6	I	16.7	I	0.0	I	1.9	I	25.0	I	55.1
		I	47.6	I	69.0	I	0.0	I	100.0	I	93.3	I	
		I	32.3	I	9.7	I	0.0	I	1.1	I	15.1	I	

COLUMN			63		13		1		1		15		93
TOTAL			57.7		14.0		1.1		1.1		16.1		100.0

$$\chi^2_{(4)} = 13.3, p < .01$$

APPENDIX L
SIGNIFICANT CROSSTABULATION
BETWEEN SATISFACTION
AND
RETENTION VARIABLES

SIGNIFICANT CROSSTABULATION BETWEEN SATISFACTION AND
RETENTION VARIABLES

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TABLE L-1 PATH BY WORK

PTH												
WRK	COUNT		I	ROW PCT	ISTAY	IN	GET	OUT	FLRTHER	OTHER	UNDECIDE	ROW TOTAL
	CCL	PCT										
	I	I										
	TOT	PCT										
		I	1.1	2.1	3.1	4.1	5.1					
-----I-----												

$$\chi^2_{(12)} = 21.1, p < .05$$

APPENDIX M

POSITIVE AND NEGATIVE FACTORS

CITED BY RESPONDENTS

TABLE M-1 POSITIVE FACTORS TOWARD STAYING
IN THE MSC CITED BY RESPONDENTS

FACTOR	TOTAL FREQ	RELATIVE PERCENT	PERCENT OF RESPONDENTS CITING FACTOR ^a
1. Positive travel and assignment opportunities	36	16.4%	37.1%
2. Positive job satisfaction	32	14.8	33.0
3. Positive job security	29	13.4	29.9
4. Positive promotion opportunity	25	11.5	25.8
5. Positive job responsibility	17	7.8	17.5
6. Positive pay considerations	15	6.9	15.5
7. Retirement benefits	13	6.0	13.4
8. Overall military benefits	9	4.2	9.3
9. Education opportunities	9	4.2	9.3
10. Negative outside economic conditions	6	2.8	6.2
11. Good chance to become a hospital administrator	5	2.3	5.2
12. Positive co-worker considerations	5	2.3	5.2
13. Patriotism	4	1.9	4.1
14. Positive work environment	3	1.4	3.1
15. Positive supervision considerations	3	1.4	3.1
16. Positive lifestyle considerations	2	0.9	2.1
17. Positive family considerations	2	0.9	2.1
18. Desire to become a hospital commander	2	0.9	2.1
Total	217	100.0%	-

^a Does not total 100% because many respondents cited more than one factor

TABLE M-2

NEGATIVE FACTORS TOWARD GETTING
OUT OF THE MSC CITED BY RESPONDENTS

FACTOR	TOTAL FREQ	RELATIVE PERCENT	PERCENT OF RESPONDENTS CITING FACTOR ^a
1. Negative job satisfaction	30	15.2%	30.9%
2. Negative promotion opportunities	26	13.3	26.8
3. Negative aspects of the military system	19	9.6	19.6
4. Negative travel and assignment opportunities	18	9.1	18.6
5. Better civilian job opportunities	18	9.1	18.6
6. Negative pay considerations	17	8.7	17.5
7. Negative family considerations	14	7.2	14.4
8. A good civilian job offer	9	4.6	9.3
9. Negative job responsibilities	8	4.1	8.2
10. Too much politics	6	3.1	6.2
11. Erosion of benefits	5	2.5	5.2
12. Lack of resources	4	2.0	4.1
13. Negative co-worker considerations	4	2.0	4.1
14. Poor chance to become a hospital administrator	4	2.0	4.1
15. Negative supervision considerations	3	1.5	3.1
16. Poor performance evaluation system	3	1.5	3.1
17. Lack of support personnel	3	1.5	3.1
18. Negative work environment	2	1.0	2.1
19. If forced out by the Air Force	2	1.0	2.1
20. Lack of job control	1	0.5	1.0
21. Poor chance to become a hospital commander	1	0.5	1.0
Total	197	100.0%	-

^a Does not total 100% because many respondents cited more than one factor

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